

HOW TO WIN IN BUSINESS WITH BE CONVERSATIONAL &

PROPOSED

MEGA AI LAB
IN NIGERIA





9 Titans

by Amy Webb

AI AWARDS AND EMERGING TECHNOLOGIES IN AFRICA

DRIVERLESS CARSINAFRICA





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Editor's Note

"Experience the best of African AI"

Al Africa is a platform which main purpose is to promote African Industries and Individuals in Africa and Diaspora who painstakingly have laboured within the scope of Artificial Intelligence, Aug mented Intelligence, Assisted Intelligence, Autonomous Intelligence and lastly but not the least Internet of Things (IoT), to create innovations of world class standard. This Maiden Edition X-rays how businesses can harness conversational commerce, certifications in chatbot engineering (CAiBOtD), innovations in healthcare sector and leading Al chatbots in Financial Sector. Some organizations especially in the banking sector and Manufacturing industries are already adopting Artificial Intelligence. We hope to educate our readers / subscribers on emerging technologies in this issue as well as in subsequent issues of the Magazine.

Happy Reading.



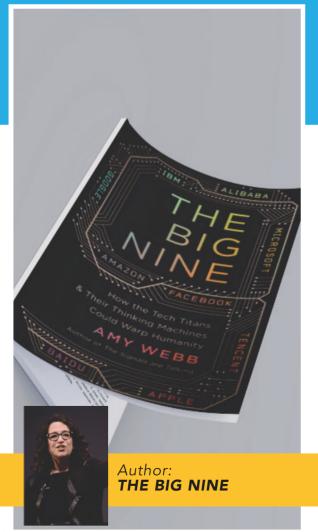
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We like to think that we are in control of the future of "artificial" intelligence. The reality, though, is that we the everyday people whose data powers Al aren't actually in control of anything. When, for example, we speak with Alexa, we contribute that data to a system we can't see and have no input into one largely free from regulation or oversight.

The big nine corporations: Amazon, Google, Facebook, Tencent, Baidu, Alibaba, Microsoft, IBM and Apple are the new gods of Al and are short changing our futures to reap immediate financial gain.

- Amy Webb



Who will be the 10th Giant



Of the big Nine tech corporations, there is yet to be an african owned corporation, now the question everyone is quietly raising in their mind is; is africa the next? Is africa ready to do what it takes to build a mega tech corporation?

AUTOMOBILES

DRIVERLESS

CARS IN AFRICA



Government is putting in place policy, legislation and strategies to take advantage of the benefits associated with AVs, while also minimising risks and unpremeditated consequences, it said.

The new policy, legislation and strategies should provide a welcoming environment for testing and development of AV technology. The department said it must ensure it's in a position to rapidly respond to the regulatory challenges posed by emerging technologies 'to ensure their safety, affordability and accessibility'.

To do this, it will look at strengthening its research capabilities, particularly with regard to safety research and innovation while maintaining close connections with the larger research community. The department's desired outcome in this space is to ensure that South Africa, as part of the global world that is impacted by these technological advances, becomes more supportive of these beneficial technologies that will ultimately improve efficiencies in the transport space, it said.

International Developments

Regulations around self-driving cars have come increasingly under the spotlight in recent years, as models from Tesla and other vehicle manufacturers gain in popularity. In April, Bloomberg reported that US law makers are pushing to allow vehicle manufacturers to produce more autonomous vehicles as part of the country's trade battles with China. The lawmakers want the National Highway Traffic Safety Administration to be able to exempt 15,000 self-driving vehicles per manufacturer from human-driving safety standards, a number that would rise to 80,000 within three years.

Currently, US automakers can produce 2,500 Self-driving vehicles for testing only. However, not all of the regulatory news has been positive, and some questions around self-driving cars still exist. Last month, US agencies launched probes into the fatal and fiery crash of a Tesla Model S in Houston that killed two people -with no one behind the wheel. The fatalities come at a critical time for Tesla, which has rolled out a feature it markets as full Self Driving to scores of customers that are beta testing the technology in advance of a wider release.





AI 🐂 Magazine

PROPOSED MEGA AILAB IN NIGERIA

GOOGLE TO OPEN AN AI LAB IN NIGERIA

A continent which is untouched by even basic of advancements in science and technology. A continent which has been exploited since centuries, till date by major powers. A continent which has seen scores of genocides, famine and millions of deaths with hardly more than a movement of eyelid by greater powers. But there is a sudden interest by technology giants to establish Al labs in Africa. A continent where basic literacy comes in a very hard way. A continent where much of the population lives below a dollar a day. A continent where no technology giant tried to impart literacy or computer literacy for greater good. It seems like the repeat of colonial stories, except now the powers involved are not the nations but the technology giants.

And yet again they are after the cheap labour, without which their technology is dirt. Google is building an Al lab in Ghana and now Nigeria is also on the cards.

Data was the king earlier. Then ML and Al came in. it was learnt in a hard way that, cleaned dataset is what counts

Head Google AI, Ghana, Moustapha Cisse, said that that there are ongoing plans to see that Artificial Intelligence, Al, helps in managing Nigerian and other African economies, particularly in the areas of flood, disaster management, technological innovations, and health among others. What he has not mentioned is the vested interest of Google in doing so. After South and South East Asia, the only next continent available with cheap English speaking and computer literate labour is African countries like Ghana and Nigeria. There are already companies operating, cleaning massive datasets. All for the major technology giants, employing hundreds of people. The schlep job which only humans do, like labeling images, so that the algorithm can make the sense of it. Data was the king earlier. Then ML and AI came in. it was learnt in a hard way that, cleaned dataset is what counts. Rest is garbage, making the algorithms and massive computing powers redundant. Countries like Nigeria and Ghana would now be unleashing a new wave of outsourcing. The one to do dirty and mean jobs of cleaning datasets, for blind algorithms. Algorithms, which cannot see it for themselves and yet called 'artificial intelligence'.

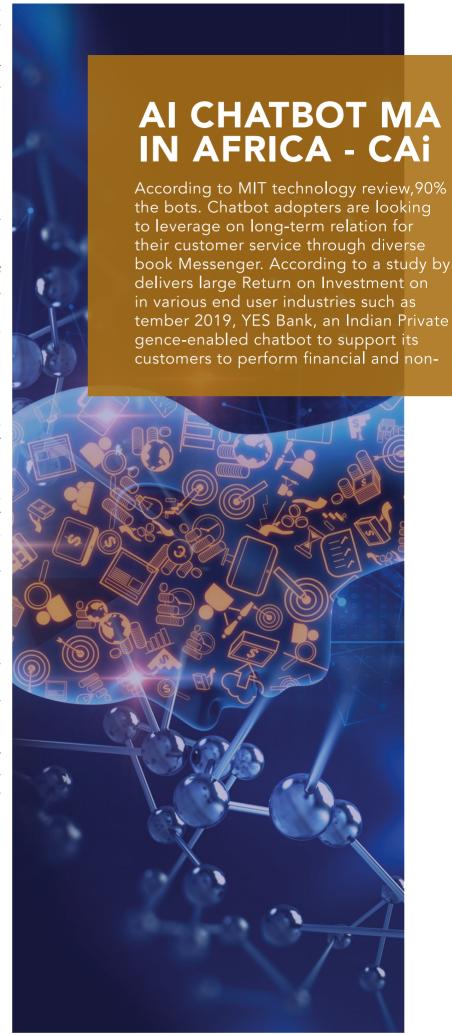
The Chatbot Market is segmented by End-user Vertical (BFSI, Healthcare, IT and Telecommunication, Retail, Travel and Hospitality, and Other End-user Verticals), and Geography (North America, Europe, Asia-Pacific, Latin America, and Middle East & Africa).

Market Overview

The chatbot market was valued at USD 17.17 billion in 2020 and is projected to reach USD 102.29 billion by 2026, registering a CAGR of 34.75% over the forecast period, 2021 - 2026. Virtual assistants are increasing because of deep neural networks, machine learning, and other advancements in Al technologies. Virtual assistants, such as chatbots and smart speakers, are used for various applications across several end-user industries, such as retail, BFSI, healthcare, etc.

For instance, the banking sector has been a significant adopter for newer technologies, primarily due to reliance on speed, trust, and communication.

Chatbots in banking sector facilitates the communication and build customer relation through cognitive analytics through learning customer's thinking for instant response. A chatbot is basically an artificial intelligence-powered application that converses with a human being to solve a problem or to answer a certain query. This reduces the operational time and enhances efficiency, that aides to the market growth. According to Sales force, 69% of consumers prefer to use chatbots for the speed at which they can communicate with a brand. Moreover, the demand for voice-activated smart devices is gaining high traction due to high convenience and fully-automated processes. In January 2020, Google launched Meena, an AI chatbot. It is a multi-turn open-domain chatbot trained end-to-end on data mined. The neutral network of Meena contains about 2.6 billion parameters. Chatbots are poised to grow at a significant rate, owing to which the companies are ready to adopt the technology to their existing business portfolio.



RKET & CERTIFICATIONS BOtD IN PERSPECTIVE

of the business reported faster complaints resolution with towards establishing such connection with their customers steady stream of revenues. This has led to incorporation of major messaging applications, such as WhatsApp and Face-Accenture Digital, 57% of business claimed that chatbot minimal investment. The chatbot are increasingly deployed Healthcare, BFSI, Retail, among others. For instance, in Sepsector bank introduced YES ROBOT, an artificial intellicustomers. Developed by Microsoft, YES ROBOT enables financial banking transactions by using conversational AI.

n January 2020, QliqSOFT, specializing in secure, HIPAA-compliant clinical communication solutions, announced the launch of its healthcare chatbot platform, Quincy. Quincy offers chatbot templates that address care-specific use cases that include pre-configured intents and dialogue flows or customized chatbots that can be built to suit unique customer needs. As a chatbot platform, Quincy enables healthcare providers to build and deploy HIPAA-compliant, Al-driven, conversational chatbots that help them put more care-related information in the hands of their patients, facilitate self-service, improve workflow, drive better outcomes, and reduce costs.

ith the recent outbreak of COVID-19, the chatbot has been increasingly deployed by various organizations to respond to customer queries and other related information. As remote working has been adopted by the different organization due to lockdown imposed in states/countries, the company are heavily dependant on chatbots to reduce the burden of customer query due to minimal availability of customer service employees.

Also, the chatbot is providing millions of people with the necessary information pertaining to COVID-19 daily. For instance, in April 2020, WHO has launched a Facebook Messenger version of its WHO Health Alert platform that offers instant and accurate information about COVID-19ia Facebook's global reach

Scope of the Report

A chatbot is artificial intelligence (AI) software that can simulate a conversation (or a chat) with a user in natural language through messaging applications, websites, mobile apps, or through the telephone. The report covers various end-user segments such as BFSI, Healthcare, Travel, and Hospitality, among others where chatbots are deployed across various geographies.

Key Market Trends

Healthcare Sector is Witnessing Significant Growth.

The massive adoption rate of Artificial Intelligence (AI) has been used to focus on customer satisfaction with the introduction of ChatBots. Healthcare service providers are continuously partnering with ChatBot companies to assist the patients better. The average number of patient spends about 30 minutes trying to find out the right service that their local hospital can provide, and the average nurse spends 1 hour a day trying to connect to the right doctor.

Chatbots are being used by leading health systems to facilitate a fully conversational discovery of their services and enable seamless scheduling for their patients. With similar ease, providers are now able to track specialists and set up referrals through a single conversation with the help of conversational AI agents. For instance, Gyant chatbot asks patients to understand their symptoms and then sends the data to doctors, who provide diagnoses and prescribe medicine in real-time. In March 2019, the company reported that they prompted over 785,000 people in Latin America to successfully complete a pre-diabetes screening.

ChatBots, healthcare service providers are proactively engaging their patients with recent in-patient procedures and chronic conditions such as diabetes, cardiovascular diseases, arthritis, etc. With a slew of advice ranging from medication reminders and lifestyle changes to mood tracking and wellness program enrollments, our service providers are to drastically increase patient satisfaction and cut down on readmission rates.

In a healthcare space, chatbots provide simplicity and convenience for consumers with contributing to better labor, productivity and connection to consumers for providers. For instance, Northwell Health is attempting out chatbots to help patients navigate oncology care, and Premera Blue Cross recently launched Premera Scout, a chatbot to help patients understand their benefits. Also, the Mayo Clinic is delving deeper into the technology by researching voice-activated bots.

In the current market scenario, there are several mobile applications that use AI for chat bot facilities or image analysis, that are increasingly becoming popular among mobile users. For example, consider the case of Babylon, a prominent mobile application based on AI that enables users to use an intelligent chatbot to help and relate symptoms and reach a relevant doctor through video chat.

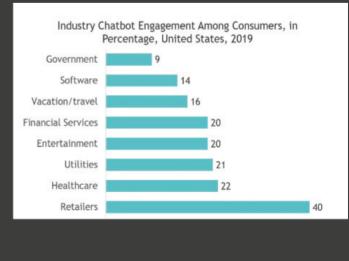
Asia-Pacific to Witness the Highest Growth

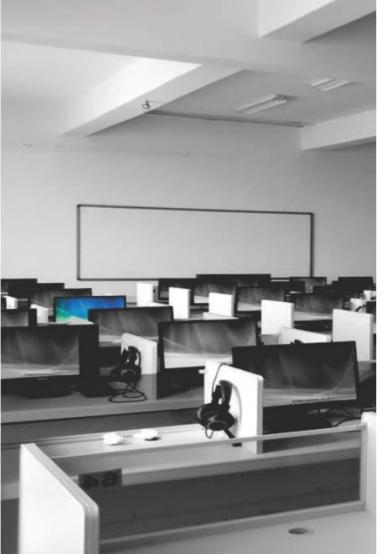
In the Asia-Pacific region, there are numerous startups investing in chatbot and machine learning technology. Additionally, small- and mid-sized enterprises are rapidly integrating the usage of chatbots in their customer service process, which offers seamless performance, handling many consumers, and enhancing the customer-engagement techniques. In July 2019, Floatbot created an artificial intelligence (AI) chatbot for Andhra Bank for its core banking servers to support its 50 million customers. It is designed to provide digital engagement and automated customer support that went through a rigorous testing process involving more than 50,000 gueries. With the rapidly expanding information and communications technology infrastructures in the leading economies, such as China and India, in the region, the market is expected to grow further.

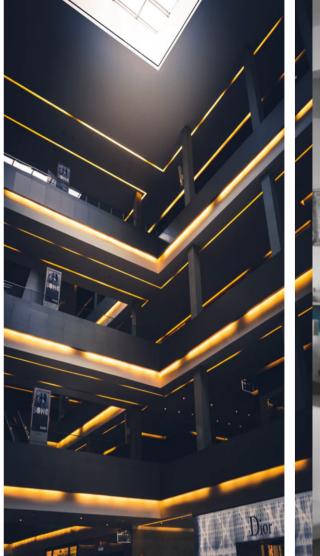
For instance, in April 2020, Al chatbot Startup yellow messengers have raised USD 20 million from an investor to meet the growing market demand. The company provides businesses with an Al chatbot for customer engagement. Currently, the companies chatbots are available in over 120 languages, such as Bahasa, Bengali, Cantonese, English, Hindi, and Thai. Also, through a partnership with Facebook Messenger, the company has recently been appointed by the National Health Authority of India to provide state governments with chatbots to help with citizen engagement amid the Covid-19 pandemic.

The massive population and rising adoption of smartphone users in the region are forming a highly promising consumer pool for the chatbot market, especially for applications, such as personal assistance. In November 2019, Singapore Startup chatbot company Pand.ai received USD 1 million in seed funding. The companies chatbot offers end-to-end support in chatbot development, ranging from conceptualizing to data cleaning to testing and even running the live bot post-production.









Competitive Landscape

Major Players

IBM Corporation

Dialogflow (Google)

Amazon Web Services Inc.

(Amazon Lex)

Creative Virtual Ltd

LiveChat Inc

chatbot market is highly competitive, owing to the presence of many small and large players in the market. The market is concentrated with the key players adopting strategies, such as product innovation, to stay ahead of the competition. Some of the players in the market are IBM Corporation, Dialogflow (Google), and Amazon Web Services Inc. (Amazon Lex), among others.

April 2020 - IBM with its Watson Assistant chatbots is helping government agencies, health-care organizations, and academic institutions throughout the world to use AI to put critical data and information into the hands of their citizens.

February 2020 - Creative Virtual has a partner-ship with Spitch AG, the leading developer of enterprise speech solutions in Switzerland. The collaboration will utilize the best-of-breed technologies of both companies to provide their customers with innovative self-service solutions. The integration of Creative Virtual's V-Person natural language chatbots and Spitch's voice technology brings an industry-leading voice bot offering to the market.

ARTIFICIAL INTELLIGENCE UPDATE:

MEETTHE LEADING CHATBOTS IN AFRICA

Businesses are slowly introducing chatbots in Africa, as more local users opt for mobile interactions through social media. At the end of 2015, 46 percent of the African population subscribed to mobile services, which is equivalent to more than half a billion people; interestingly, this percentage is expected to increase to 54 percent in 2020. With such a growing use of smart phones, a chatbot revolution in Africa is not very far away.

The Chatbot Revolution

For starters a chatbot simulates human conversation and are interactive. Using Artificial Intelligence (AI), a chatbot is supported across different messaging platforms including Twitter and Facebook. Here are three chatbots in Africa automate services that are convenient and available 24/7 to users.



1. LEO

Recently, the United Bank of Africa (UBA), the Nigerian multinational financial institution, hired Leo a chatbot. At the launch, Leo displayed a unique way of how bank customers could use social media platforms to carry out their banking activities. UBA's chat banker is a Facebook bot, something which the company says is ecessary in today's fast-paced world with demands for quick-time transactions. Customers will be able to carry out basic banking facilities like opening a new bank account, checking balances, transferring funds and receiving instant alerts. Additionally, customers will be able to pay bills, get answers to loan queries and applications and check balance statements.

2. NURU

Nuru is created by UXstudio, a Budapest-based Hungarian start-up, and currently is available to users in Kenya and Ghana. This AI chatbot assists users in matters relating to agriculture, classified ads, finances and healthcare. African farmers looking to sell can use Nuru to set prices. The chatbot automatically configures a price based on the type and the amount they have. The activation of the deal can only occur once the farmers are satisfied. Once activated, the buyers can reach out to the farmers through message or phone call. For mobile money transactions, users in Kenya heavily rely on mPesa. Nuru integrates the transaction through Messenger the chatbot asks for a password and, once authenticated, the transactions can successfully take place. Nuru also provides health tips based on questions asked by users.



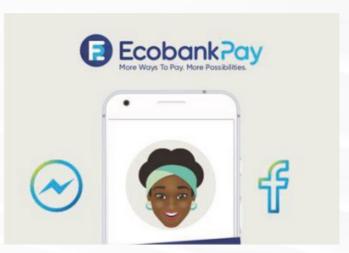


3. ZIVA

ZIVA (Zenith Intelligent Virtual Assistant) enables customers to perform financial transactions and enjoy real-time customer service from their mobile phones. Customers can enrol by simply adding the bank verified WhatsApp mobile number 07040004422 on their mobile devices, agree to the legal terms of use and then initiate a conversation. This product provides the convenience for the bank customers to interact and transact on a 24 hours basis on the encrypted WhatsApp platform. With this capability to respond to chats/queries anchored on the existing WhatsApp platform, customers will be able to open new accounts, receive instant transaction notifications, check their balances on the go, transfer funds and top up airtime. They will also be able to confirm cheques, pay bills, apply for loans, block their accounts, and request mini statements, amongst other banking services.

4. RAFIKI

Ecobank has launched Rafiki, a chatbot that changes customer experience forever! Rafiki helps customers enjoy Ecobank products from Facebook, solves issues around account enquiries and answers bank-related questions. Rafiki brings Ecobank digital services including Ecobank Mobile and Ecobank-Pay directly on social media channels, which have become a part of everyday life. Ecobank now provides various points of contact to access bank services virtually and uses AI to learn customers behaviour and better serve them at their point of need/contact.



You Can Bank On Me I am Ivy Fidelity Bank's Virtual Assistant I can help with:

5. IVY

Fidelity Bank Ivy is your virtual assistant from Fidelity Bank making financial services easy and accessible to customers.

6. TAMARA

You can find Tamara on Whatsapp and on the Web. She offers various services depending on where you holla at her. On the web, she can help you pay bills, transfer money and purchase airtime.



7. Keirabot & Hazie

Keirabot is one of Botsza's six tailor-made chatbots in Africa. Botsza's chatbots currently work across many industries like hotel reservation, flight booking, e-commerce, banks, finance, insurance and customer services. Currently supported on multiple messaging platforms, two chatbots are already operational for users Haziebot and Keirabot.

Keirabot relieves users from the tiring process of searching homes by utilizing browsing functions via Facebook Messenger or Skype. Various tasks are performed using AI including credit checks, tenants, and comparisons between selling and buying a home. Hazie, on the other hand, is a recruitment chatbot in Africa that allows job seekers to acquire ideal jobs. Users can simply apply for jobs using social media platforms like Facebook Messenger and Twitter.



CHALLENGES

Despite extensive benefits, the revolution of chatbots in Africa faces challenges.

According to The World Bank, African mobile and wireless markets are highly concentrated; in 27 countries, one player has more than 50 percent market share. Monopolies are still present in Africa: eleven in international gateway services and six in wireless internet services.

Additionally, with more than half of the population yet to subscribe to a mobile service, a big challenge for Africa is to connect the unconnected and unleash the economic potential of increased connectivity. Such challenges would also involve the problems of moving text-based interactions to chatbot technology.

THE POTENTIAL SOLUTION

But the African youth may be the answer to such challenges. Sixty percent of Sub-Saharan Africa's population is under the age of 25, making Africa the world's youngest region, according to World Economic Forum. Social media giants like Facebook and Google are already developing programs for the people in Africa.



In September 2016, Face-book founder, Mark Zuckerberg visited Nairobi to learn more about mobile money and meet entrepreneurs and developers. The U.S. social media giant later announced that the center would host an ncubator programto help develop technology start-ups while simultaneously training 50,000 Nigerians in digital skills.

In 2017, Google expanded its Africa initiatives following CEO Sundar Pichai's visit to Nigeria. Alphabet also plans on increasing the funding for African startups by providing \$20 million in grants to digital nonprofits. In April 2016, the company also launched Digital Skills for Africa, an initiative to provide free training (online and face-to-face) to people across 27 countries in Africa.

With such promising ventures, innovative technology in Africa could allow the country to stay on par with the rest of the world.

HOW TO WIN IN BUSINESS WITH CONVERSATIONAL COMMERCE



What Is Conversational Commerce?

Conversational commerce is a type of communication between brands and customers through messaging apps. The purpose of conversational commerce is simulating the in-store experience for customers. At the heart of that experience is a virtual assistant, typically a chatbot, which provides help through predetermined options.

Customers love chatbots because they provide answers in seconds. That's why these personal assistants are slowly becoming a norm in eCommerce. Businesses have realized their value: handling repetitive support queries, engaging shoppers, and giving basic information such as return policies.

How Does Conversational Commerce Get Customers?

The answer is simple: by keeping customer experience with your business positive and engaging. People don't want to waste their time and money on businesses that treat them badly. So, they tend to follow those with amazing customer support and lots of help available during store browsing. What makes a good experience for customers? Four things:

Convenience, Friendliness, Speed, Consistency.

Amazingly, conversational commerce can help you a bit with all of these and you'll be smart to use this strategy right now. Already, the experience is more important for customers than product and price. PwC, for example, found it to be the deciding factor in making buying decisions for customers around the world. Customer experience is the new opportunity to get customers. So, give customers a great experience, and they'll return to you. Here's how to make that happen.

How To Win More Customers With Conver- So, the customer can get to the best options sational Commerce?

Early adopters of conversational commerce bots, etc. are using these strategies.

1. Build Your Email List

Email marketing is a great source of revenue for eCommerce sellers. Getting people to subscribe to product newsletters, however, is tough. Push notifications could work, but you need something more to become a leading brand. Website chatbots are the thing you need. They can get you eCommerce leads automatically! Yes, you read that right. Here's how it goes:

online store. The chatbot is configured to ask for an email address in exchange for a perk 3. Help With Shopping-Related Questions On like 5 % discount

The chatbot displays this message visitors (the choice depends on the seller).

That's it. The chatbot works 24/7 and gets subscribers, who are glad to get some perks from brands they love. This free chatbot from 5% Nutrition store, for example, promises exclusive offers and discounts to first-time visitors. In exchange for an email, of course, which is a reasonable deal. This way, you can build a sizable email list of leads. Now, it's over to email marketing folks at that point to nurture customers and get sales.

vice Search

Many customers are starting to use chatbots to choose a product and service. Thankfully, the chatbot technology has gotten to the point where it can give customers nice recommendations.

The examples of such chatbots come from all industries and businesses. The one from Booking.com is worth a look. This Facebook Messenger chatbot calls itself virtual travel assistant, and lives up to the name. If you check out the conversation below, you'll see that it asks relevant questions (location and Absolutely. date) to help the customer find a perfect It's not a matter of being a tech-savvy seller and than a minute.

quickly without going through the search on the website. Conversational commerce at its best! tools website chatbots, Facebook Messenger Just like that, a chatbot helps customers choose products and services. But the benefits for eCommerce sellers don't end there. As the ability to recognize customer intent improves, chatbots are becoming more effective at keeping conversations engaging and fun. Al-based smart chatbots, for example, even have unique personalities and communication styles. Here's an example. When asked about shipping, K?kua, a Facebook chatbot from snack producer Kaimana Jerky, gives this awesome answer. Can you imagine looking for products with such a fun assistant? That would be an awesome An eCommerce seller adds a chatbot to their experience exactly what buyers are looking for.

Facebook

to Many customers follow brands on social media first-time store visitors, repeat visitors, or all to get help with shopping. In fact, 37% of them contact brands to get support related to their orders and shopping in general.

Business researchers, marketers, and growth hackers have been keeping a close watch on this trend. Diana Nadim Adjadj, an eCommerce writer at TrustMyPaper: here were 300,000 Messenger chatbots a few years ago, and they keep getting popular.

Social media is where customers begin to feel comfortable buying, so businesses use chatbots there to chat with them.

Example: Kindred Bravely, a clothing brand, has 2. Assist Customers With Product & Ser- a bot that helps with common shopping-related

> Order status updates, help with figuring out product size and product returns. Indeed, those are common questions of online customers. So, a lot of customers might be asking these every day. Instead of emailing or calling Kindred Bravely, shoppers can just go to Facebook and get the answers in seconds. No need to wait for a support agent to become available.

Conversational Commerce: Summary

Should you try a chatbot for your online store or social media business page?

hotel to stay in. All of this happens in less following marketplace trends. It's about giving your customers the experience they want and deserve. It's time to explore your options.



1. Conversations are always happening

Look, as much as I'd like to make all of this about super new crazy technology, I just can't.

Conversations have, are, and always will be part of doing business.

There is no way around it. In fact, we mention this in pretty much every article we write on this topic to try to hammer it down. Conversational commerce is nothing new. What is new is the scale at which it can be done today.

Conversation as a business strategy is not going anywhere. Therefore, companies that focus on making these conversations efficient and fruitful will win in the long term. That's just, like, math. Why is everyone suddenly talking about it like a shiny new concept, you ask? Good question.

I believe there are four core reasons why companies that adopt a conversational commerce approach will thrive in the long run.

WRITTEN BY ALEX DEBECKER

2. Scaling through (chatbot) tech

Let's say you enter a high street retail store and are greeted with a lovely salesperson. You explain what you are looking for, the salesperson presents you with options, explains the different characteristics of each product, and helps you pick the right one to suit your needs You've just had a conver-

sation, in a shop, where they do commerce. I think we should call this conversational commerce. Woah, new concept!

Right, all jokes aside, this interaction is actual conversational commerce in real time.

Now, like I said, this has been happening since ever. What's new is the possibility for businesses to have this exact interaction at incredible scale (I'm talking thousands over thousands of them), in real time, 24/7 all year round.

This is all made possible thanks to recent technology surrounding chatbots and mobile messaging platforms. About two years ago, Facebook followed the East's footsteps and opened up their Facebook Messenger API.



This allowed hundreds of thousands of people to put their geek on and start developing (albeit poor) chatbots. This simple event launched the chatbot trend we are now riding. More though, than that, opened up the possibility for businesses all over the world to have these conversations at great scale and low cost. We went from the one-to-one image above to this. Technology allows one-to-one conversational commerce at large scale.

Exciting times! Businesses that now focus on adopting a conversational commerce approach get to deploy it across multiple channels, at high speed and incredible scale.

Even Shopify, one of the largest ecommerce platforms, saw the benefits and started opening up their APIs.



3. We want to talk (yes, really)

Most of us have instant visions of throwing our mobile phone at the wall as soon as we see an incoming call. It may come as a surprise, then, that today's consumer actually wants to talk to brands. That's right. You will avoid your mother's call, but you will send a text to your local Tesco to ask their opening hours.

We did our own research in the matter. It turns out consumers who message brands say reaching the desired outcome (68%), ease of experience (48%), and speed (44%) are most important. It is no surprise, then, that chatbots are taking off. While the in-shop conversation I describe in the previous point is incredibly satisfying from a customer point of view, it is also somewhat rare and totally unscalable.

What happens in real life is that you enter the store, pretend to browse for 20min whilst the staff is busy doing the million things they have to do, and you end up leaving without anything. A loss for you, a loss for the business; and certainly a loss regarding outcome (you didn't get what you wanted), easy of experience (pretending to browse is awkward and annoying), and speed (you literally did not move or got help. Zero speed).

A constantly available chatbot offers the exact opposite experience. You get to message it, get your answers, and get out. The ease of experience in this commercial conversation is at its apex, along with reaching the desired outcome and doing it all at a speed that satisfies your needs.

4. Conversations are the new search

I love this. It is a subtle implication of the whole chatbot trend but I genuinely believe it is going to make conversational commerce companies more efficient than their competitors.

The way we search online has drastically changed in the last few years. Back in 2006, a search like 'Where is the best Italian restaurant?' would have been completely ludicrous.

Today, we can ask this question and Google will return relevant results.

The truth is we tend to ask our questions to Google in a more and more conversational matter. It is no surprise that, when confronted with a chatbot, most users will use very conversational language.

Businesses that implement a conversational commerce strategy will thrive over their competitors by being more aware of the way their customers speak. Keeping a pulse on language as well as keywords and key phrases is becoming more relevant than ever.



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AI Nagazine 19

HEALTH SECTOR AI INNOVATIONS

(INVIVO AND INVITRO INNOVATIONS-ASSISTED INTELLIGENCE IN AFRICA)

Computer simulations can replace in-vivo experiments for implantable medical devices.

Computer simulations are already an integral part of the design, analysis and implementation of medical devices. Yet, is it possible for simulations to replace in-vivo experiments? This still sound like might science fiction, since it means to have a virtual tool that faithfully mimics all aspects of the medical device and the living system: from biochemical reactions occurring at cellular levels to the biomechanics of individual organs. Despite the many difficulties this endeavour encompasses, I am, for the reasons I have put forward below, convinced that simulations will replace in-vivo experiments for implantable medical devices.

Currently, we rely on in-vivo experiments for the final testing of implantable medical devices. However, in-vivo experiments come at a high cost: They are expensive, time-consuming and raise a series of ethical questions. Furthermore, if an in-vivo experiment gives a negative result, the exact origin of the failure remains usually unknown and only limited insight can gained. This initiates a rather long and laborious phase of iterative improving-and-testing.

The motivation to reduce the number of in-vivo experiments is so strong that governmental regulations and extended funding opportunities are now in place. A sizable decline animal testing was achieved in the latter part of twentieth century, and focus shifted from in-vivo towards in-silico experiments. Digital twinning of biological systems attracts attention both from academia and industry. So we have the motivation and opportunity; do we have the means?

considerable Recently advancements have been made in simulations of thermodynamic, biomechanic, and hemodynamic states in living organisms. Mature simulation methods are now available to predict time-dependent changes in microscopic processes at the cellular level, as well as changes in macroscopic scales within one organ, their interactions with mechanical devices or the whole body. The next steps in research will be to couple these models to predict the three-way interactions between the cellular metabolism, organ functionality and physiological environment.

Undoubtedly, this involves challenges



Some are easier to overcome, such as the requirement of powerful computational resources with advanced parallel computing and massive data transfer capabilities. Some are more challenging, such modelling the complicated and evasive interactions between the microscopic states that define cellular metabolism, bioprocesses within an organ coupled with the medical device, and the behaviour of the whole body. Fortunately, artificial intelligence and machine learning can prove to be extremely useful in developing sophisticated models to mimic not-well-understood real-life interactions. We see examples of these readily in aerospace engineering.

These recent advances in technology, alongside the strong motivation and opportunities in this research direction, make me confident that soon we will have mature computational models that replace in-vivo experiments for implantable medical devices.



Artificial intelligence (AI) and attendant digital transformation are revolutionizing almost every industry, but one industry that stands to benefit greatly from this technology is the health care industry.

This is partly due to the benefit AI technology is likely to bring to patients. Major trends in technology and funding have seen most health care facilities use machines for many functions from next-generation sequencing, electronic gathering and storage of data to diagnosis and referrals.

The collection and analysis of big data have reached unprecedented levels, beyond human natural capabilities for data analyses and interpretation, thanks to sensors and novel algorithms that allow the continuous measurement and storage of patients' health parameters.

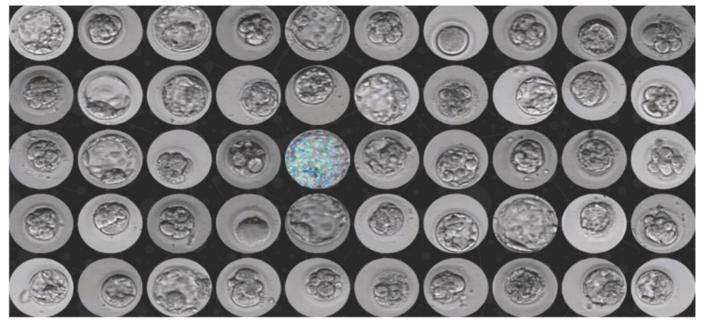
The translation of AI technology and big data into actionable biomedical and clinical information has expanded and is supporting precision medicine. These algorithms now have the capability to learn and therefore improve over time. The advantages of using AI algorithms or neural networks in medical practice are already being felt in many health care systems with fewer diagnostic mistakes, savings of resources, and allowing for clinicians to attend to other patients' needs (Berwick and Hackbarth, 2012; Chen et al., 2016). Several studies have shown that AI algorithms can perform diagnostic functions at similar levels as human specialists (Esteva et al., 2017; Kermany et al., 2018).

Other reports have shown that AI algorithms can outperform human specialists, but overall AI can only aid human specialists in making a decision (Coudray et al., 2018; Ehteshami Bejnordi et al., 2017; Kermany et al., 2018) for now. Before AI algorithms are rolled out in biomedical facilities and clinics, several issues will have to be resolved for that to happen. The word clinic is used in this review to mean any medical establishment where patients are treated and given advice on health-related conditions and is used synonymously with hospital, medical center, and health center.

This review gives an overview of the opportunities and challenges that clinicians and scientists face in the bid to incorporate AI in biomedical engineering and clinical practice. Artificial intelligence (AI) has for decades captured our collective imaginations as we consider both the opportunities and threats posed by hinkingmachines. Following huge recent advances in this much-hyped field, AI now features in our daily lives: as virtual assistants on our smartphones, within our Google searches and translations, and, perhaps in the near future, in our self-driving cars and home-help robots.



Al Magazine



Images of individual IVF embryos that the AI system uses to detect certain features (highlighted pixels), which are associated with the likelihood that an embryo will successfully implant. Image credit: Manoj Kumar Kanakasabapathy (CC BY 4.0)

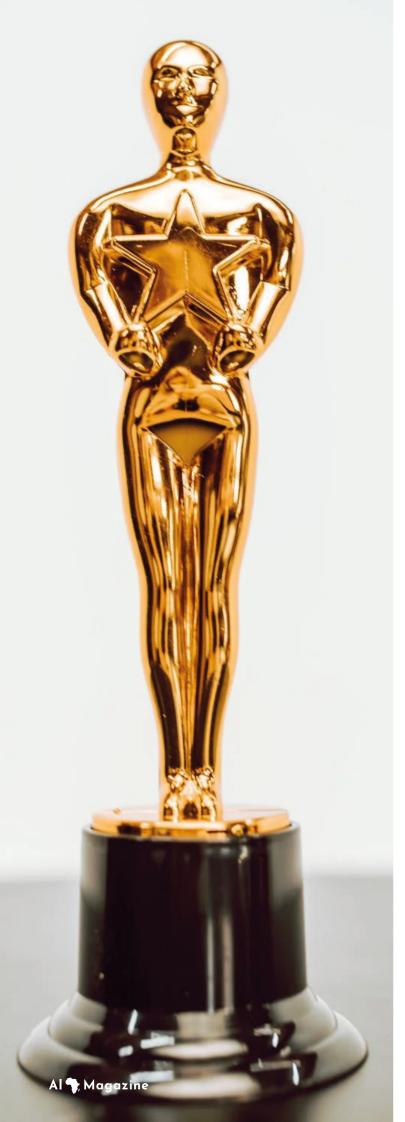


Around one in seven couples have trouble conceiving, which means there is a high demand for solutions such as in vitro fertilization, also known as IVF. This process involves fertilizing and developing embryos in the laboratory and then selecting a few to implant into the womb of the patient. IVF, however, only has a 30% success rate, is expensive and can be both mentally and physically taxing for patients. Selecting the right embryos to implant is therefore extremely important, as this increases the chance of success, minimizes complications and ensures the baby will be healthy.

Currently the tools available for making this decision are limited, highly subjective, time-consuming, and often extremely expensive. As a result, embryologists often rely on their experience and observational skills when choosing which embryos to implant, which can lead to a lot of variability. An automated system based on artificial intelligence (AI) could therefore improve IVF success rates by assisting embryologists with this decision and ensuring more consistent results. The AI system could learn how embryos develop over time and then uses this information to select the best embryos to implant from just a single image. This would offer a cheaper alternative to current analysis tools that are only available at the most expensive IVF clinics.

Now, Bormann, Kanakasabapathy, Thirumalaraj et al. have developed an AI system for IVF based on thousands of images of embryos. Using individual images, the system selected embryos of a comparable quality to those selected by a human specialist. It also showed a greater ability to identify embryos that will lead to successful implantation. Indeed, the software outperformed 15 embryologists from five different centers across the United States in detecting which embryos were most likely to implant out of a group of high-quality embryos with few visible differences.

Artificial intelligence has many potential applications to support expert clinical decision-making. Systems like these could improve success, reduce errors and lead to faster, cheaper and more accessible results. Beyond immediate IVF applications, this system could also be used in research and industry to help understand differences in embryo quality.



AI AWARDS AND EMERGING TECHNOLOGIES IN AFRICA

Al Africa is introducing and showcasing Africans to companies already adopting Al in their product and service development through the platform of the Al Africa Magazine and Al Awards. Al Africa Magazine in collaboration with the Chartered Institute of Strategic managers and Leaders (CISML), USA is poised to celebrate Africa's Al and IoT adopters. Our main objectives are but not limited to:

- Promotion of businesses adopting AI and Emerging Technologies
- Presenting awardees as credible, experienced and safe businesses or individuals.
- Creating Mega awardees to the continental and intercontinental audience
- Mobilizing patronage on a large scale for awardees and participants.

Al Africa Journal will be showcasing fifty (50) companies and Academic Individuals adopting, creating and implementing Al and IoT on quarterly basis originating from Africa by Africans. Below are criteria for selecting or nominating companies / organizations for 2021 Maiden Edition of the Magazine and Award.

- Presence of a Dynamic Web Platform
- Presence of a customer live chat
- Presence of an Al Chatbot
- Few taps to consumption of product or service on web, mobile app or AI chatbot
- High tech Organizational Al Process
- Presence of Narrow Artificial Intelligence Agent
- Customer Experience powered by AI
- Tech Product / Service
- Registered in Africa or Registered in any other continent but owned by African

Criteria for Student Award

- May be currently running a BSc or Masters or PhD programme in any recognized institution.
- Have an AI or IoT project that has commercial potential as recognized by the HOD of the department.
- Independent Researcherr, or working in a company
- Abstract of the project sent in before the event date.



CATEGORYOF AWARDS

CATEGORIES OF AWARDS

Al Research Awards

Best Research Paper (MSc or Undergrad)

Best PhD Thesis

Best Post-Doc Research (Academic or Com-

mercial)

Best New Algorithm for Al

Best New Topology for Al

Best Research Company for AI

Best Artificial General Intelligence Research

Work

Best Neuroscience / Biology Inspired

Research

Best Academic Spin-out

Al Technical Awards

Best Technical Research of Al

Best Technical Implementation for AI

Best Technical Tool or Framework for AI

Best Cloud Platform for Al

Best Hardware for AI / Best Hardware Startup for AI

Best Integration of Human Intelligence into the AI Lifecycle

Al Industry Awards

Best Al Startup

Best use of Al in the Enterprise

Best use of AI in the Public Sector

Best AI for Social Good or Charity Work

Best Incubator or Accelerator for AI

Best Venture Capital Firm for AI

Best Al Consultancy

Best Al Integrator

Best Al Community

Best Al Conference or Event

The Award

Al Business Applications Awards

Best use of AI in Robotics

Best use of AI in Education

Best use of AI in Banking or FinTech

Best use of AI in Legal Profession

Best use of AI in Food

Best use of AI in Health and Medicine

Best use of AI in Public Safety

Best use of AI for Automation

Best use of AI for NLP, NLU or NLG

Best use of AI for the Senses (Vision, Sound, Smell,

Touch and Taste)

Best use of AI in the Arts & Entertainment (Music,

Literature, Sculpture, Visual)

Best use of Al in Insurance

Best use of AI in Retail

Best use of AI in Fashion

Best use of AI in Security and CyberCrime Protection

Best use of AI in Logistics

Best use of AI in Government and Politics

Best use of AI in Marketing and Advertising

Best use of AI in Human Resources

Best use of AI in Climate Change, Farming and Agriculture

Best use of AI for IoT

Best use of AI for Self Driving Vehicles

Best use of AI in Management Consultancy

Best use of AI in Research & Development

Al Customer Applications Awards

Best use of AI in Customer Service

Best Consumer Application of AI

Best use of AI for Personal assistant

Best use of AI in a Financial Application

Best AI for Gaming and Virtual Reality

Junior Al Awards

Best Junior AI Project (focus on AI for Good) AI Young Role Model of the Year

AI Special Awards

Award for Journalism and Analysis Award for Responsible AI and Ethics

Al Application of the Year

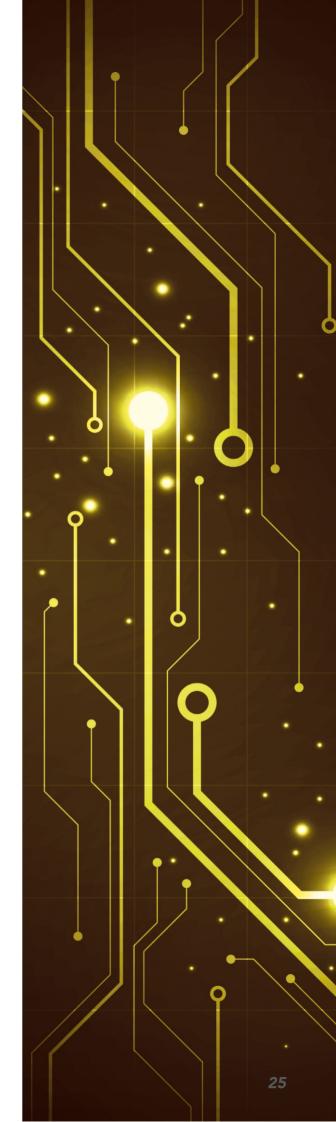
Al Company of the Year

Al Person of the Year

Al Alarmist of the Year

Lifetime Achievement Award

Special Achievement Award



Zenith Bank Launches Intelligent Chatbot, ZiVA



Nigeria's leading financial institution, Zenith Bank Plc, has introduced an Artificial Intelligence (AI) powered Chabot on WhatsApp named ZiVA (Zenith Intelligent Virtual Assistant), which enables customers to perform financial transactions and enjoy real-time customer service from their mobile phones. Customers can enroll by simply adding the bank's verified WhatsApp mobile number 07040004422 on their mobile devices, agree to the legal terms of use and then initiate a conversation. This product provides the convenience for the bank's customers to interact and transact on a 24 hours basis on the encrypted WhatsApp platform.

Commenting on the new banking solution, the Group Managing Director/Chief Executive of Zenith Bank Plc, Mr. Ebenezer Onyeagwu said: "The launch of ZiVA is driven by the need for additional secured channels of communication with our customers as we deepen our retail penetration".

Speaking further on the WhatsApp Chabot, Onyeagwu noted that "since the behavioral pattern of the modern customer dictates that they want to engage with brands over the channel of their choice, it was really important for us as a leading financial services institution and a pioneer of several technological innovations in the financial services industry to implement this solution in order to continue to create value for our teeming customers who incidentally were already using WhatsApp as a primary channel of communication". Zenith Bank places a premium on its core business strategy anchored on People, Technology and Service, to create value for its numerous clientele. With a team of dedicated professionals, the bank leverages its robust Information and Communication Technology (ICT) infrastructure to provide cutting-edge solutions and products through its network of branches and electronic/digital channels.

Zenith bank was also recognized as Bank of the Decade (People's Choice) at the This Day Awards 2020, Retail Bank of the year at the 2020 Business Day Banks and Other Financial Institutions (BOFI) Awards, and Best Company in Promotion of Good Health and Well-Being as well as Best Company in Promotion of Gender Equality and Women Empowerment at the Sustainability, Enterprise and Responsibility (SERAS) Awards 2020.

AI IN AFRICA 2020 - 2030

The Mention of Artificial Intelligence in the Draft Digital Transformation Strategy for Africa Alex Moltzau

Feb 17, 2020, 4 min read

The draft Digital Transformation Strategy for Africa (2020 - 2030) (DTS) is a document that is being written by the African Union. I thought it would be interested to examine the mention of artificial intelligence specifically and how it is written into the strategy.

What is the African Union?

The African Union is a continental union consisting of 55 member states located on the Continent of Africa. The AU was announced in the Sirte Declaration in Sirte, Libya, on 9 September 1999, calling for the establishment of the African Union. It was officially launched in 2002 as a successor to the Organisation of African Unity (OAU, 1963999).

Where is Al Mentioned in the Draft Strategy of DTS?

In the second paragraph artificial intelligence is the first technology mentioned as a leap-frogging opportunity. furthermore, Africa has fewer legacy challenges to deal with and is therefore adopting digitized solutions faster out of necessity. For Africa, the current moment offers a leapfrogging opportunity. Today's technologies such as artificial intelligence, robotics, block chain, drones, internet of things, wearable technologies, 3D printing, Big Data, and software-enabled industrial platforms indicate the scale and speed at which technology is transforming traditional socio-economic sectors.

It is mentioned as one of the last bullet points in specific objectives:

"Build inclusive digital skills and human capacity across the digital sciences and education, both technical and vocational, to lead and power digital transformation including coding, programming, analysis, security, block chain, machine learning, artificial intelligence, robotics, engineering, innovation, entrepreneurship, and technology policy & regulation".

Mentioned as part of 'defining the problem' as an emerging technology:

"Policy makers and regulators need to keep pace with advances in technology, address the new regulatory frontiers and create the foundation upon which digital transformation can achieve its full potential. Being prepared for digital transformation and emerging technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), Machine to Machine communications (M2M) and 5G is fundamental".

Mentioned in the section for digital innovation and entrepreneurship:

"Innovation is at the heart of the continuing digital revolution that is affecting almost every part of the social, commercial, and political areas. Relentless innovation in the hardware, software, applications and networking fields including, Cloud Services, Artificial Intelligence, Blockchain, and the Internet of Things, 3D Printing, Digital Sequencing, Nanotechnology and sensors among others are driving change at a staggering pace. Innovation and Entrepreneurship are thus critical if Africa has to remain in the race with the rest of the world, and benefit from the Digital transformation within the broader framework of Agenda 2063".

It is mentioned in the section about digital industry:

here has been an active expansion of online companies generating competition with offline giants, disrupting the traditional manufacturing, delivery and sales processes albeit in Africa, the sectors such as agriculture, government services, manufacturing that could benefit from such innovation has lagged behind, due to legacy processes or high startup investments. The need to use industrial digital technologies such as additive manufacturing, artificial intelligence, remote monitoring, 3D printing and cloud analytics is the way to ensure that Africa's industries are digitalized. For example, the manufacturing industry is faced with new technological opportunities and business models.

In the section about emerging technologies:

igitalization, automation and Artificial Intelligence (AI) are bringing new unprecedented dimension of prosperity for humanity. Emerging technologies such as blockchain, artificial intelligence, Internet of things, 3D printing, etc. provide practical ways of applying them to perform tasks normally requiring human intelligence. They also hold the potential to disrupt our economies and destroy lives throughout several generations.

With another mention in the same section: urthermore, the ability of computer systems to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages is evolving over time and already exists in some parts of the world [Artificial Intelligence].

As a policy recommendation for adoption: ncourage public and private sector to embrace the emerging technologies (Block chain, Artificial Intelligence

With another policy recommendation for collaboration:

Encourage/include public operators in strategies aimed at embracing the emerging technology (block chain, Artificial Intelligence through research and development.

What Can Shortly Be Concluded From These Mentions?

There is no particular strategic intent towards artificial intelligence specifically, as it is mentioned in a series of ways in the same breath as a series of other emerging technologies. As an example the word 'infrastructure' is mentioned 61 times as opposed to 'artificial intelligence' mentioned 10 times. That does mean there is a recognised importance, yet no clear focus on this area other than as part of the emerging. There is no clear imperative in the strategy for national Al strategies or along these lines related to other technologies.

Digital Single Market in the DTS

A clear mention is to harmonise legislation at continental and regional levels towards a Digital Single Market (DSM). Europe has been working on a digital single market for some time and it was announced in 2015, and gained a particular member responsible from the European Union. The EU DSM has three main points:

Access to online products and services

Conditions for digital networks and services to grow and thrive

Growth of the European digital economy

In Africa they want to build a Digital Single Market in Africa by 2030, and it is stated as a specific objective. So it may be another ten years down the line.

This may certainly influence the use of AI in Africa in the future.

FUTURE OF ARTIFICIAL INTELLIGENCE

Artificial Intelligence is a form of intelligence displayed by machines, mimicking or simulating the intelligence that created it, and is assumed to be smarter, more responsible, and self-learning.

- Al Engr. David Mba

ASPECTS OF ARTIFICIAL INTELLIGENCE

- 1. Simulating higher functions of the human brain
- 2. Programming a computer to use general language
- 3. Arranging hypothetical neurons in a manner so that they can form concepts
- 4.A way to determine and measure problem complexity
- 5.Self improvement
- 6. Abstractions ability to deal with ideas rather than events
- 7. Randomness and creativity

TYPES OF ARTIFICIAL INTELLIGENCE

Narrow (weak) Al Strong (AGI) Al Artificial General Intelligence Super Intelligent Al

ARTIFICIAL INTELLIGENCE AND RESHAPENING OF THE HUMAN SOCIETY

According to Maria Bartimoro and Julia Limitone (2019) published in FoxBusiness, AI has penetrated health care to the transportation industry. In February 2019, the US government launched an American AI initiative which aims to stimulate AI development. The reality is that AI will reshape work and lead to downfall of certain jobs. According to a report by Oxford Economics, by 2030 Robots will displace 20million jobs.

In 2017, another group formed the organization Deep Learning Indaba, which now has chapters in 27 of the (Africa) 54 countries. University courses and other educational programs dedicated to teaching machine learning have burgeoned in response to increasing demand. In conclusion, the future of AI in the world and in Africa especially is progressively alarming. Hence, the need to democratize this new emerging technology for Africans and Nigerians in particular, not forgetting that Nigeria is known to be the mother of Africa with regard to population not to fast adoption of AI.

FEW COMPANIES USING AI

John Divine writer with money, usnews.com, observed that millions of consumers interact with Artificial Intelligence directly or indirectly on a day-to-day basis via virtual assistants, facial recognition technology, mapping applications, and a host of other software.

- Nvidia corporation is a specialized semiconductor company whose technology plays a central role in many young, high-growth areas of technology GPU
- Alphabet (GOOG, GOOGLE) is a heavy investor in Artificial Intelligence. It uses AI and deep learning to power or automate many extremely important parts of its business.
- Salesforce (CRM) specializes in software as a service (SAAS). Business are always interested in acquisition of AI startups

REVENUE PROJECTED FOR AI

Research published by forbes.com shows that;

- 1.AI and Machine learning have the potential to create an additional \$2.6T in value by 2020 in marketing and sales, and up to \$2T in manufacturing and supply chain planning.
- 2.Gartner predicts the business value created by AI will reach \$3.9T in 2022.
- 3.IDC predicts worldwide spending on cognitive and Artificial Intelligence systems will reach \$17.6B in 2022.



WAYS AI WILL CHANGE BUSINESS OPERATIONS

Emotional analysis

Annette Zimmermann said this 2018, "By 2022, your personal device will know more about your emotional state than your own family".

Emotion AI is also known as affective computing, it is an iteration of AI capable of detecting human emotions and responding to the emotions accordingly.

Imagine being able to collect the emotions of a viewer watching a video online, or using email sales sequencing, messaging bots, and even customer support telephone options that adapt automatically based on the user emotions. How would that change your business? A study that analysed 1400 case studies of top advertising campaigns over the last 30 years found that ads which triggered human emotions were about 100% more likely to report very large profit gains.

Customer support

Efficiency is perhaps nowhere more important than in customer support the place where people want answers and they want them right away.

According to a report by Temkin, a moderate improvement in customer experience can massively improve revenue.

Sales and Leading generation

Al is making big splashes in business-to-business sales and leading generation.

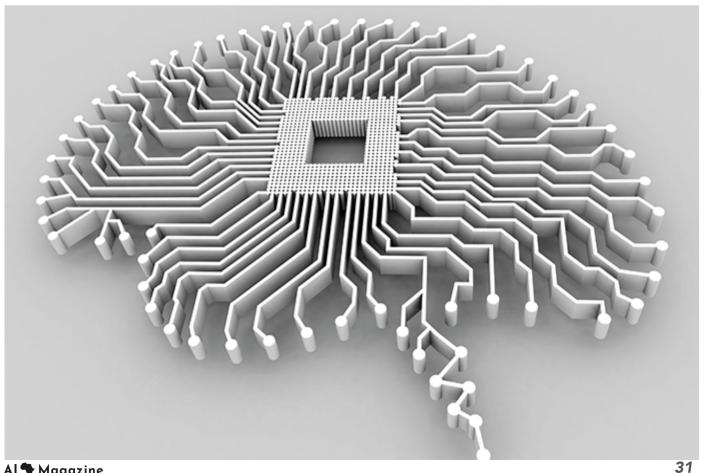
Harvard business review reports, for instance, that businesses which use AI can reduce the call time by up 70% and increase number of leads by 50%. Additionally, one source believes that 85% of sales related tasks could be outsourced to the robots by 2020 (without a loss, and likely an improvement in close rate). Take Leadfuze, for example. This tool is an AI-based product focused on sales improvement, and finding the right customer segment and lead. It is the first and only lead generation software tool of its kind that combines data aggregation from multiple trusted sources while offering unlimited access and complete list building automation.

Talent intelligence

Recruiting the right talent for your company can be a frustrating experience. Massive online search engines for jobs like Indeed or Monster can help source candidates, but many times, parsing the thousands of potential applicants is an exceptionally time- consuming task.

FREELANCING AND AI-FUTURE OF WORK

- 1. Companies are looking for specialized skills for one-off projects
- 2. Employee benefits are expensive for employers
- 3. Millenials are on demand creatives
- 4. Getting work as a freelancer is cheap and simple
- 5. There is no such thing as job security
- 6. AI will less-impact freelancers
- 7. Technology favours the Gig economy
- 8. There is increased legislature action to support gig workers
- 9. Freedom and flexibility is attractive
- 10. No limit on how much you can make
- 11. Going online reduces cost for everyone involved
- 12. Freelancing shifts the work-life balance





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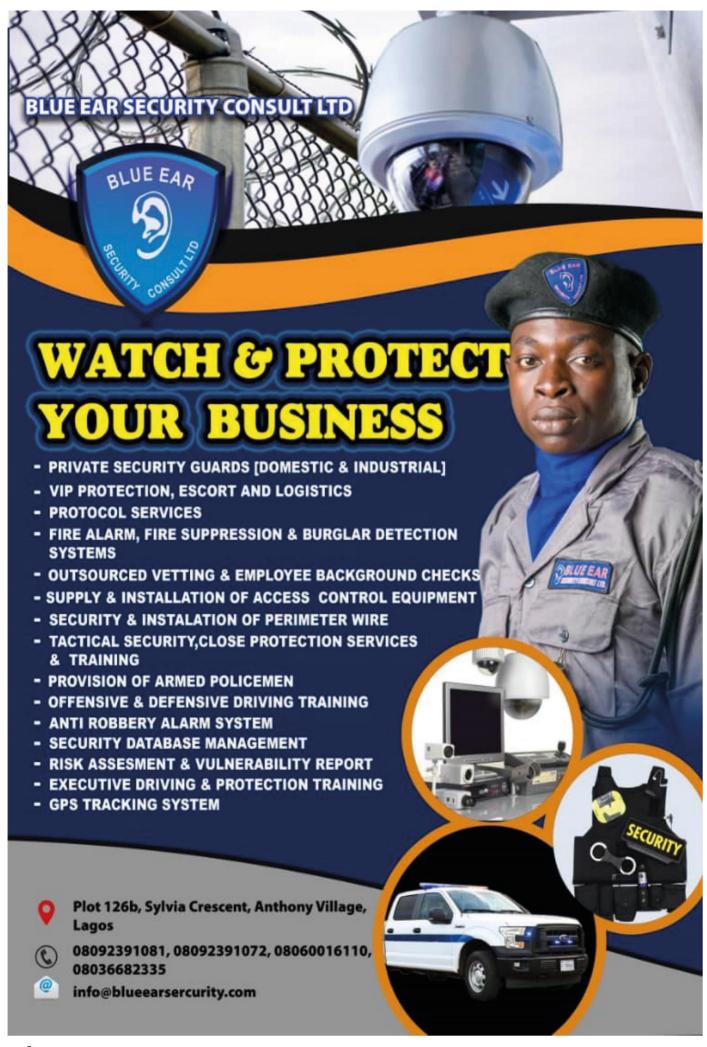
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- WHATSAPP
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- ADVERT OPPORTUNITIES VIA AMANDA BUSINESS COMMUNITY

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- BRIEF DESCRIPTION OF COMPANY'S SERVICES
- PAYMENTS & LOGISTICS PROCESS IF AVAILABLE
- · HUMAN IN THE LOOP CONTACT





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UBA makes history by introducing banking on WhatsApp and Facebook for the first time in Ghana

United Bank for Africa (Ghana) Limited has pioneered a new way of banking through a Chabot called Leo on WhatsApp and Facebook Messenger. The historic launch of the product "LEO" was virtually done through a livestreaming on social media anchored by the renowned TV and radio personality Giovanni Caleb.

Speaking at the launch, the Managing Director and Chief Executive Officer of UBA Ghana, Mr. Isong Udom noted, the world is changing and particularly as a result of Covid-19 and our bank is adapting to every possibility technology presents. LEO product has been developed painstakingly to answer the call of the time where little or no human intervention is required. LEO as an answer to our customers' dissatisfaction with the status quo and the best thing to happen to Ghana.

"Banking through LEO has integrated all our offerings from account opening to customer service on WhatsApp and Facebook Messenger for the comfort and convenience of our customers", Mr. Udom stated.

Speaking on the product features, Head of Digital Banking Sales Mr. Kenneth Ugwuanyi explained, "LEO is a personal banker, for the first time, you can bank on social media! simply exchange pleasantries with LEO to initiate a conversation and LEO will chat you into opening an account, checking your account balance, transferring funds, mobile money transactions, paying utility bills, airtime top up, Savings and spend limit, Linking of additional accounts, Customer care and other Banking Services such as request / stop / confirm cheques, block card, log & track complaints, ATM / Branch locator, freeze on account, and so much more. Convenience has never meant more. He added all customer or potential customers have to do is to save the number 0577822822 and initiate a chat on WhatsApp by typing Hi, Hello, Charle etc. Similarly, search for UBA Chat Banking on Facebook messenger and initiate a chat.

Al ¶, Magazine 40



AI Magazine 41

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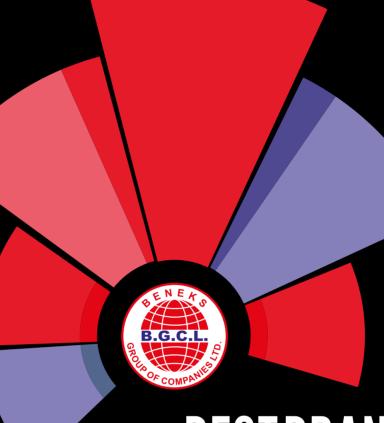
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ARTIFICIAL INTELLIGENCE

- by Michael Peter



Artificial Intelligence, coined by John McCarthy in 1955, in contrast to the natural intelligence [of the animate - man], also called machine intelligence, is a science of computing which enables a computer to learn and save from the series of inputs and processes inferred on it, to the end of functioning semi-autonomously as without the full control of its user, processing data and delivering output as per the amount and quality of data it has access to. The computer perceives its environment and takes actions that maximize its chances of success. It uses a series of resources differentiated and harmonized by the science of data, which is another discipline, interlinked, but not synonymous.

Following the advent of computers in the 1940s, the potential of the digital technology has been quite exemplified in programs that work complex mathematics, of which the first programmers who were mathematicians benefitted a lot. Despite the persistent evolution of computer science, as in these present days that we have its usefulness decentralized amongst all disciplines, coupling the anxiety that this development will threaten the usefulness of the human workforce, no programs,

however, that can match human flexibility over wider domains or in tasks requiring much everyday knowledge, has been completely developed, though the technology continues to advance. On the other hand, artificial intelligence, as a parcel of this technology, is found fast dominating the human workforce, becoming an indispensable integral of virtually all fields, as diverse as medicine, education, automobile industry, astronomy, business, even other software programs such as computer search engines, voice recognition or handwriting recognition tools, etc.

The community of developers are now in the quest for methods that integrate this astounding technology, starting from simple password validations and other security improvements, to feeding their collection of usable data in form of texts, images, audios, and videos, to systematic clusters that machine learning algorithms can engage. Neural networks, which are components of machine learning models, a subset of artificial intelligence, are being made to decipher the difference between images, to recognize objects, animals, places, and people. Although not so intelligent now, these models will be better in the nigh future such that the Google reCAPTCHA will become obsolete, and administrators will have to find another way of distinguishing between human users and robots. Computer vision is a credible implementation of this accord.

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If someone wishes to delve into this field, it is important to first understand the complexity and vast implementation of mathematics, as artificial intelligence seem to be the most logic skills demanding concept of computer science. It is inarguably important to also emphasize the explicitness of programming languages and tools used in artificial intelligence — however, for a beginner, it is recommended they start with the Python programming language. It is also advisable, to every other person who is not [or does not want to be] affiliated with computer science or artificial intelligence in particular, that the future will be brutal to people who can neither develop AI tools nor use them. Be it in medicine, or politics, or in the home, the ability to relate with these tools will exempt the future majority. While artificial intelligence grows fast, it seems uncertain how this technology will affect the lifestyle of people, whether nations will reform their economy sequel to its methods, or develop new methods that fit their society, although it is quite apparent that the world might work from home.

The importance and consequences of artificial intelligence cannot be overemphasized, and the very factor which underlies this is the uncertainty of the future. Though numerous predictions are made, criticism as to whether this technology will indeed prove profitable for the good of humanity, or if perhaps it will destroy man, the computer has only just begun in its revolutionary impact to humanity.

In a precise conclusion, it is essential to note that all of the features attributed to the computer are subject to the developer's opinion and choice, and so, no matter how much the computer develops, there is always a loophole through which the human is absolved. This is only to establish that whatever happens with the computer, man is responsible, and we cannot declare the future in the peril of man because of the intelligence we are giving to the inanimate machines.

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WHY EVERY AFRICAN BUSINESS SHOULD BE AI-COMPLIANT

Conceptualized by: Al Engr. David Mba Written by: Michael Peter Published by: Crownmedia

Artificial Intelligence has transcended fiction and the amazing robots of the cinema are no longer far-fetched. One might say this was expected because the world had inarguably inclined towards digital technology since the advent of computers. However, what wasn't anticipated is the striking growth of this invention in business, more so in activities that are not directly related to computer science. Who would have thought groceries stores would at a time begin to have computer departments that function as though in a software company? Computer science is decentralized, it has become a tool more than a discipline.



rtificial Intelligence, having flexible applications in virtually all forms of disciplines makes itself indispensable. Businesses that pursue productivity cannot ignore it; and if they try to, they lose a lot, if not everything. The most common element of this argument is chatbot technology. Whenever artificial intelligence is mentioned, the audience often imagines robots. That's in fact what chatbots are. Chatbots are computer programs that engage humans in interaction with the sole purpose of providing help while mimicking human conversational intelligence. In other words, they are artificial intelligence in conversation — simulating human intelligence by conversing with people in ways that make them seem they are indeed humans.

So, why would businesses lose if they don't own chatbots? To begin with, it is important to understand chatbot technology and how it fares in promoting business goals.

Since artificial intelligence is the digital mimicry of human intelligence and one can agree that communication is the backbone of a business, it is not difficult to come to the conclusion that artificial intelligence in the business loop can prove very useful or fatal depending on how it's developed. If the communication between clients and vendors should be operated by an AI, one might fear that this AI will not be able to handle critical conversations that put customers' trust in the business on the line, or they might, in fact, be confident that leaving communication to an Al will reduce human interference to a great degree, thereby sparing them of time and effort. While the former cannot totally be denied, the latter is the reality we see today in businesses that use AI.

Leaving communication to AI might not necessarily mean granting 100% control to the computer program. The chatbot species that exist today, in fact, aren't up to the task of independently managing all businesses communications. While this might seem a shortcoming of the technology, the improvision for this handicap is what assures the human that they have the AI and their business in total control.

Even if chatbots manage most of the conversations between clients and the business, the business personnel still has control over each conversation and how the chatbot communicates, by having a human in the loop of every conversation who takes over the conversation when the AI becomes helpless. In other words, rather than AI being a mediocrity in business, it has become an extension of human business management which humans reserve total control over. So, non-AI-compliant businesses can be assured AI has only the goodies to offer.

Chatbots are being used to replace a lot of humans who dominate the customer service department of small and large businesses, not only because they are faster, tireless, or able to operate without stopping, but also because they have evolved to do a lot of things that were impossible for computers in the past, some of which are Natural Language Understanding (NLU), mild emotional intelligence, mood detection, and cross-platform integration. Natural Language Understanding enables chatbots to understand the context of users' messages, grasp their insinuation, and give intelligent replies according to this apprehension as will a fellow human being. This feature is powered by Natural Language Processing (NLP), an intrinsic branch and tool of artificial intelligence which helps computers understand and manipulate human language by extracting, examining, and utilizing patterns in sets of data in text or speech.

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With the NLP technology, chatbots can as well display emotional characteristics in their interactions since it allows them to understand different insinuations in different users' messages. Also consequential is their ability to infer a user's mood by examining the tone in their speech or text replies. Apart from this intellectual and mild emotional intelligence, chatbots prove better than human customer service agents since they don't have to interact with one customer at a time. They can chat with a very large number of people at the same time, as much as can access that particular node of the internet. Chatbots can be integrated into a vast array of platforms and devices, not limited to the web or mobile apps, but also in audio devices, such as is implemented in the Amazon Alexa. Even physical robots own their audibility and communication to their integrated chatbot software.

While chatbots reign among the applications of artificial intelligence, businesses also use other implementations to ease business processes. The most common are data science and machine learning for data analysis, data manipulation, and recommendation systems. In other words, artificial intelligence does more than provide an automated communication system through chatbots but also provides businesses with automated data management. With these overly beneficial applications, businesses can focus on marketing, developing their business ecosystem, and improving their services.

The African market is very large and digitization is still novel. There is no greater opportunity than which African businesses have now. The first businesses and establishments to use AI-powered business ecosystems can already be seen dominating the market in a few years. That is because artificial intelligence is here to stay and the early adopters will be in better positions of familiarity and reputation.





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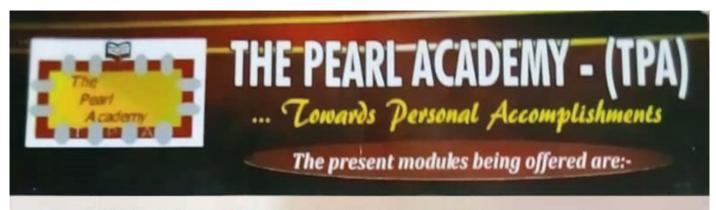
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