



The Future of Artificial Intelligence in the Telecom Industry

HOW AND WHY?

AI can help to find their next customers of telecom sector

- ▶ Telecommunication is one of the fastest growing industries.
- ▶ It is shifted from basic phone & internet services to high-tech and automated environment.
- ▶ Leading telecom organizations are investing in AI research and development, implementation of AI tools and techniques to improve operations and increase revenue.

BUT

- ▶ Still telecom sector is struggling to figure out what type of AI applications are used.
- ▶ How much and at what level they need to invest in AI and emerging tech innovation across leading telecom companies?
- ▶ How much there is need to focus on AI to save their future?

Telecom sector is using AI in three forms:

- ▶ Speech Recognition

Voice apps and speech recognition technology

- ▶ Network Transformation

Company's software approach towards self-learning network fueled by Artificial Intelligence

- ▶ IoT and Big Data

To process the data in structured form

Why Telecom is using AI?

- ▶ To improve customer service:
- ▶ Big telecom companies use AI to manage all (1) “Online chats with customers” and (2) voice interfaces, these are the most popular use-cases of Artificial Intelligence in telecom sector.
- ▶ AI chat bot is the gatekeeper, that analyze the request and guide to the right direction.
- ▶ AI helps telecoms to detect the problems and solve it by proposing the right services, based on analyzing customers’ data to improve network reliability.

Use of Drones and AI Software in Telecom

- ▶ Telecom sectors are using drone to take picture of top level of tower
- ▶ Drone takes the live pictures of tower top in different angles and sends to the technician's [Engineer] desktop, where he can see actually in his office, what's going on in real time that saves time.
- ▶ As drone industry is evolving, robotic industry is also evolving, AI industry is evolving, at some point, they will merge and work together and revolutionize the world of telecommunication.

Through this techniques, humans efforts can be used in much more efficient way

Example of Verizon

In 2016, the company closed the year with reported consolidated earnings of [\\$126 billion](#) which reflects a decrease of approximately 2.4 percent in total revenue from the previous year.

Verizon announced in February 2017, the global launch of Exponent, a new business and technology venture offering a portfolio of software and internet platforms

- ▶ AI
- ▶ Big Data
- ▶ IoT
- ▶ Cloud Computing and Storage platforms

“With these techniques, Verizon personalized marketing campaigns, targeted advertising, and deep customer engagement.”

There was 0.04% increase in revenue in 2017 and 3.83% increase in 2018

Source: PRNewswire

Implementation of Automated Sales Assistant in Telecom Sector

- ▶ In 2016, the telecom provider implemented an automated sales assistant into its business model. The AI-driven assistant named Angie was designed by Conversica, a company touted as “the only provider of artificial intelligence-based lead engagement software for sales and marketing.” The Harvard Business Review reports that Angie averages an estimated 30,000 emails each month and analyzes the responses to identify “hot leads” (who we can assume are routed swiftly to salespeople without much further waiting).
- ▶ Angie can deal 99% of the emails response and only 1% is forwarded to the Manager.

Customer Service

Customer service is a massive expense for any company with over a million customers

Telecom firms will want to have a delightful customer relationship for their business

Now nearly every telecom uses artificial intelligence and machine learning to improve its customer service primarily by using virtual assistants and chatbots.

Telecoms get a massive number of support requests for set up, installation, troubleshooting, and maintenance. Virtual assistants automate and scale responses to these support requests, which dramatically cuts business expenses and improves customer satisfaction.

Chatbot is a gatekeeper, that analyzes the request, and guides to the right direction and saves time

Customer Service & Example of Vodafone & Nokia

- ▶ Telecoms possess enormous amounts of data from customers.
- ▶ With the use of AI and machine learning, telecoms can extract meaningful business insights from this data so they can make faster & better business decisions.
- ▶ Vodafone – which has AI technology and saw a 68% improvement in customer satisfaction – introduced its new chatbot TOBi to handle a range of customer service questions. The chatbot scales responses to simple customer queries, delivering the speed that subscribers demand.

Source: TechSee

- ▶ Nokia started to invest in AI and developed virtual assistant Mika suggests solutions to network issues, leading to a 20% to 40% improvement to its first-time resolution rate.

Communications Service Providers (CSPs) focused on AI Investments

Today's communications service providers (CSPs) face increasing demands for higher quality services and better customer experience (CX).

Forward-thinking CSPs have focused their AI investments on four main areas:

- ▶ Network optimization
- ▶ Preventive maintenance
- ▶ Virtual Assistants
- ▶ Robotic process automation (RPA) [**PRA is a form of business process automation technology based on AI**]

These all areas are possible due to AI Applications.

- ▶ Artificial Intelligence applications in the telecommunications industry use advanced algorithms to look for patterns within the data, enabling telecoms to both detect and predict network anomalies, and allowing them to proactively fix problems before customers are negatively impacted.
- ▶ AI-driven predictive analytics are helping telecom sector provide better services by utilizing data, sophisticated algorithms and machine learning techniques to predict future results based on historical data.

The Future of AI in the Telecom Industry

- ▶ Artificial Intelligence applications in the telecommunications industry are increasingly helping CSPs manage, optimize and maintain not only infrastructure, but also customer support operations. Network optimization, predictive maintenance, virtual assistants and RPA are all examples of use cases where AI has impacted the telecom industry, delivering enhanced CX and added value for enterprises.
- ▶ As AI & Big Data tools and applications become more available and sophisticated, AI can be expected to continue to accelerate growth in this highly competitive space.

To maintain the leadership position in the industry, there is need a strong focus on innovation, partnering with best-in-class technological solutions providers that accelerate digital transformation and improve the Customer Experience by providing quicker, simpler and more effective service.

Thank you

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