

## IBM Earns Record 9,100 Patents in 2018, Tops U.S. Patent List

*IBM's inventions include use of AI to help people converse, protect the earth's lakes and combat voice phishing*

ARMONK, N.Y., Jan. 8, 2019 /PRNewswire/ -- IBM (NYSE: [IBM](#)) inventors received a record 9,100 patents in 2018, marking the company's 26th consecutive year of U.S. patent leadership. IBM led the industry in the number of artificial intelligence (AI), cloud computing, security and quantum computing-related patent grants.

"IBM is committed to leading the way on the technologies that change the way the world works – and solving problems many people have not even thought of yet," said Ginni Rometty, IBM chairman, president and CEO. "Our clients and their customers are the beneficiaries of these innovations, particularly our leadership in AI, cloud, blockchain and security for business."

Overall, nearly half of the 2018 patents relate to pioneering advancements in AI, cloud computing, security, blockchain and quantum computing.

The industry-leading 1,600 [AI](#) patents IBM inventors were granted in 2018 include new ways to use AI to help us converse and protect the earth's lakes and waterways. AI also played a large role in the more than 1,400 [security](#) patents IBM inventors were granted in 2018, including an AI-powered security approach to combat voice phishing.

Some IBM patents granted in 2018 include:

- [Project Debater](#) is a first-of-a-kind AI system from IBM Research that can debate humans on complex topics. IBM inventors patented an approach to use machine learning to identify evidence, such as relevant text segments in unstructured text data, which supports or opposes a claim or topic under consideration. This could help provide advancements in how machines and humans interact in conversation.
- IBM inventors patented an intelligent system that could be used to identify, characterize, and monitor vertical temperature profiles and gradients, which affect marine life, in lakes and other aquatic ecosystems. Analytics combined with the [IBM Cloud](#) and Internet of Things (IoT) mapping has helped

IBM along with collaborators to engineer the [world's smartest lake](#), Lake George.

- "Phishing" occurs when a person or computer system tries to obtain sensitive information from unknowing victims. Most recently, phishers have turned to voice phishing, or "vishing," in which unsuspecting victims are called directly and "vishers" use a voice over IP (VoIP) system to mask their identity. IBM has patented an AI system that could, with permission from the primary user, analyze conversation patterns between two parties in order to identify attempts by one of the parties to deceive the other. The system could send an alert message in real-time to warn a potential vishing victim and help company IT experts better prevent and manage computer and mobile security threats.

IBM inventors received more than 2,000 [cloud computing](#) patents in 2018, including a patent on a specialized monitor for unikernel-based virtual machines that takes a lightweight approach to improving isolation and security between a cloud application and its host, while also reducing provisioning times and improving performance. The approach is related to IBM's research in container security and could enable organizations to more easily move data and applications securely across cloud and on-premises environments.

IBM inventors also continue to break ground in the development of blockchain and its rapid pace of global adoption. IBM was granted a patent on an approach for encrypting data stored in a [blockchain](#). Members of a blockchain network can put data on a blockchain that they would like to share with other blockchain network members. However, instead of storing the data openly for any of the blockchain participants to see, members can encrypt their data within the blockchain and only those that have been given a decryption key can read the data. IBM has enabled this patented capability to users of the open source Hyperledger Fabric.

IBM researchers also patented significant inventions in [quantum computing](#), including a new way of miniaturizing components to improve the performance of quantum computers.

The new patents were granted to a diverse group of more than 8,500 IBM inventors in 47 different U.S. states and 48 countries.

For more information about IBM's patent and innovation leadership, see [www.research.ibm.com/patents/](http://www.research.ibm.com/patents/)

*\* 2018 patent data sourced from IFI CLAIMS Patent Services: <http://www.ificlaims.com>*

Read a blog on IBM's patent leadership by Arvind Krishna, Senior Vice President, Hybrid Cloud, and Director of IBM Research [www.ibm.com/blogs/research/2019/01/2018-patent/](http://www.ibm.com/blogs/research/2019/01/2018-patent/)

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