

Title: Quoc V. Le

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Lê Việ̣t Quộ́c (born 1982), [1] or in romanized form Quoc Viet Le , is a Vietnamese-American computer scientist and a machine learning pioneer at Google Brain , which he established with colleagues from Google. He co-invented the doc2vec [2] and seq2seq [3] models in natural language processing . Le also initiated and lead the AutoML initiative at Google Brain, including the proposal of neural architecture search . [4] [5] [6] [7]

Education and career

Le was born in Huế in the Thừa Thiên Huế province of Vietnam. [5] He attended Quộ́c Hộ́c Huộ́ High School [8] before moving to Australia in 2004 to pursue a Bachelor's degree at the Australian National University . During his undergraduate studies, he worked with Alex Smola on Kernel method in machine learning. [9] In 2007, Le moved to the United States to pursue graduate studies in computer science at Stanford University , where his PhD advisor was Andrew Ng .

In 2011, Le became a founding member of Google Brain along with his then advisor Andrew Ng , Google Fellow Jeff Dean , and researcher Greg Corrado. [5] He led Google Brain 's first major breakthrough: a deep learning algorithm trained on 16,000 CPU cores , which learned to recognize cats by watching YouTube videos—without being explicitly taught the concept of a "cat." [10] [11]

In 2014, Le co-proposed two influential models in machine learning. Together with Ilya Sutskever , Oriol Vinyals , he introduced the seq2seq model for machine translation , a foundational technique in natural language processing. In the same year, in collaboration with Tomáš Mikolov , Le developed the doc2vec model for representation learning of documents. Le was also a key contributor of Google Neural Machine Translation system. [12]

In 2017, Le initiated and led the AutoML project at Google Brain , pioneering the use of neural architecture search . [13] This project significantly advanced automated machine learning.

In 2020, Le contributed to the development of Meena, later renamed LaMDA , a conversational large language model based on the seq2seq architecture. [14] In 2022, Le and coauthors published chain-of-thought prompting , a method that enhances the reasoning capabilities of large language models. [15]

Honors and awards

Le was named MIT Technology Review 's innovators under 35 in 2014. [16] He has been interviewed by and his research has been reported in major media outlets including Wired , [6] the New York Times , [17] the Atlantic , [18] and the MIT Technology Review . [19] Le was named an Alumni Laureate of the Australian National University School of Computing in 2022. [20]

See also

Oriol Vinyals

Ilya Sutskever

Jeff Dean

Alex Smola

References

Mathematics Genealogy Project

Google Scholar

DBLP