

Sergey Brin



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Sergey Brin is software engineer and entrepreneur, most well-known for founding Google along with Larry Page. Brin is the 13th-richest person in the world according to Forbes, with an estimated net worth of US\$50.5 billion.

Early Life and Education

Brin was born on August 21, 1973, in Moscow in the Soviet Union, to Russian Jewish parents, Eugenia and Mikhail Brin. The first few years of Sergey's life were spent in the Soviet Union, Vienna and Paris. The family then emigrated to the United States, in 1979, when Brin was 6 years old. His father was a professor of Mathematics at the University of Maryland, and his mother a researcher at NASA.

Brin attended primary school in Adelphi, Maryland and graduated from Eleanor Roosevelt High School in 1990. From a young age, he was encouraged to learn Mathematics by his father, a mathematics professor, and as a result, excelled at it, and chose to pursue Mathematics and Computer Science at the University of Maryland. In only three years, at age 19, he received his Bachelor of Science from the Department of Computer Science in 1993 with honours in computer science and mathematics.

Brin then began his graduate studies in computer science at Stanford University on a graduate fellowship from the National Science Foundation. He had a great interest in data mining, and during his time at Stanford authored several papers on data mining and pattern extraction for leading academic journals, including "Scalable Techniques for Mining Causal Structures," "Extracting Patterns and Relations from the World Wide Web,". He also created an application to translate scientific documents from TeX, the processing language often used for scientific documents, to HTML.

The Beginnings of a Search Engine

At Stanford, he met Larry Page, who would go on to be the co-founder of Google with Brin. The world wide web was still in its formative years, and it's potential unrealised. Page wanted to create a method to determine the number of webpages that were linked to a given page- "the Page-Rank Mechanism". The existing search engines ranked pages on the frequency of the

searched words found in a webpage. However, Page realised that a far more relevant list of results would be produced, by ranking websites based on the number of links leading to it from other websites.

To fully explore this idea, he requested Brin's help, who had significant expertise in data mining. Together, Page and Brin wrote the paper "Dynamic Data Mining: A New Architecture for Data with High Dimensionality," and followed it with "The Anatomy of a Large-Scale Hypertextual Web Search Engine", which became one of the most downloaded scientific documents in the history of the Internet.



From their dorm rooms, Page and Brin set up a prototype of their search engine called "BackRub", that used the Page-Rank mechanism. Over a few months both Page and Brin's dorm rooms were converted into an office, machine laboratory and programming centre, where they tested their new search engine designs online. The project grew so rapidly that Stanford's computing infrastructure experience several problems. In August 1996, the initial version of Google was made available on the Stanford website. By mid 1998, up 10,000 searches were being performed, and Brin realised this was a fully viable and marketable product.

Google

The domain name google.com was registered in 1997, and Page and Brin incorporated Google as a privately held company in 1998. They relocated their servers from Larry Page's dorm room to a garage in Menlo Park, California to build their business. Brin served as the company president, and Page, the CEO. Their mission statement was "to organize the world's information and make it universally accessible and useful." The business, along with new CEO and business partner, Eric Schmidt was widely popular, with searches and pages increasing exponentially.



Google's IPO in 2004 raised \$1.67 billion, giving the company a market capitalization of \$23 billion. Many of Google employees with shares in the company became millionaires overnight, and Larry Page and Sergey Brin found themselves multibillionaires at age 27. Over the years, their business model has generated 99% of income from advertising. Google has since gone on to incorporate more products, such as Gmail, Google Docs, Google Translate, and many more. It is consistently one among the topmost profitable companies.

Further Projects

Brin works extensively with Google's philanthropic arm Google.org to create a positive impact on the world using technology. Currently, Brin and the team at Google.org are pursuing research into renewable energy sources. In 2012, Brin took part in the Project Glass program. Project Glass's aim is for their products to display information currently available to most smartphone users and allow users to interact with the Internet using natural voice commands.

Impact

Brin has received several awards and accolades. Among several other awards, Brin, along with Larry Page, was named the MIT Technology Review TR100, as one of the top 100 innovators in the world under the age of 35. In November 2009, Forbes listed Brin and Page as the fifth most powerful people in the world. It is not hard to see why.

Brin's work (along with Page's) has shaped the world we live in immensely. It is rightly compared to the invention of the printing press. The authors of the Google Story have written: "Not since Gutenberg ... has any new invention empowered individuals, and transformed access to information, as profoundly as Google." From a software engineering standpoint, their impact is in building the novel Page Rank Algorithm and the search engine. However, the power of their invention is multiplied when one looks at their success from a business viewpoint, and even more from a humanitarian viewpoint. They have transformed an algorithm and a product into an immensely profitable business. Most remarkably, their creation has changed the way people consume information completely. Never has it been so easy to search and find information or publish your findings or viewpoints. This access and exchange of information happens within seconds and is completely free. We hold the world's libraries in our hand, and

any question has an answer- all one has to do is simply “google” it. In this way, Brin’s work has been monumental and personally inspiring.

Google’s mission that they stated in 2002 - “to organize the world’s information and make it universally accessible and useful” is continually being pursued, and is well on its way to its realisation. Sergey Brin’s contribution and success in this field is his legacy and inspires many software engineers today.

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