Luminous Overview

About Luminous

Luminous is a machine learning systems company building the world's most powerful, scalable AI supercomputer on Earth. With its supercomputer, Luminous will fulfill the AI promises made by Silicon Valley 30 years ago, such as eliminating car accidents with self-driving cars and detecting and curing diseases through highly personalized drug discovery and automated health analytics. The AI community knows how to deliver all of these capabilities from an algorithmic perspective, but more compute, bandwidth and memory are desperately needed. Luminous is building the supercomputer that satisfies those demands.

Luminous was founded in 2018 by Marcus Gomez and Dr. Mitchell Nahmias, and has raised over $105 million in funding to date.

Boilerplate for Press Releases

Luminous is a group of highly-motivated pragmatists on a mission to build useful, usable, safe AI. The hardest problem and the biggest barrier to that vision is building a supercomputer capable of running tomorrow's AI applications. By building systems that provide order-of-magnitude improvements in performance and scalability, Luminous will drive radical improvements in technology to enable the world's most sophisticated artificial intelligence.

Luminous' Executive Team

Marcus Gomez, CEO & Co-Founder: Marcus is the co-founder and CEO of Luminous Computing. He's spent nearly a decade thinking about and contending with the hardware constraints that Luminous intends to eliminate. He served as the CTO of a computer vision startup and as an early member of the AI research team at Tinder, in addition to working in various research roles at Google and the Mayo Clinic. He received his BS in Computer Science from Stanford. He dropped out of high school to work at the Harvard Medical School on network biology, and dropped out of Stanford's MS program to start Luminous. In his free time, Marcus frequents karaoke bars to live out his rockstar fantasies.

Mitchell Nahmias, CTO & Co-Founder: Mitch is a co-founder and Chief Technology Officer of Luminous Computing. He knew, very early on, what he wanted to do: to make machine intelligence a reality. He began as a researcher at Princeton, where he was pioneer in establishing a mathematical relationship between a laser and a biological spiking neuron. This helped create a field now known as Neuromorphic Photonics. His focus soon switched to building systems of neurons, where he discovered that the real bottleneck was communicating data across the dense networks that connected neurons together. As he saw neural networks becoming commercially useful at a large scale, Mitch realized that the best way to create the most powerful AI supercomputer was to build a company to do it.

He received his B.S., M.A., and Ph. D. at Princeton, where he was awarded the NSF Graduate Research Fellowship. While at Princeton, he was a contributing author to the textbook on Neuromorphic Photonics, and is an author on more than 70 papers and patents. His work has been cited over 2,700 times. He led the Afrobeat band, Sensemaya, and was a member for

over 10 years. Mitch has played piano professionally as a jazz musician for most of his life, despite never having learned to properly read music.

Michael Hochberg, President: Michael Hochberg is President at Luminous Computing. His career has spanned the space between fundamental research and commercialization for over 20 years. He founded four silicon photonics companies - Simulant, Luxtera, Elenion, and SLS - garnering a total exit value of over a billion dollars.

He's held faculty appointments at a number of institutions, including UW, UD, NUS and Columbia. He directed OpSIS, the first organization to offer silicon photonic multi-project wafer runs, pioneering the creation of integrated PDK's for photonics. He authored, with his colleague Lukas Chrostowski, the most widely used textbook in silicon photonics. He's authored over 100 papers and patents, and his work has been cited over 14,000 times. Michael won a number of awards for his work, including a Presidential Early Career Award in Science and Engineering, which is the highest honor granted by the US government to young scientists. He is a fellow of Optica, the Optical Society of America.

Michael was thrown out of high school in Louisiana and then attended a free, public residential boarding school. He ended up doing all of his degrees at Caltech, completing his MS and PHD in a total of three years and winning the best thesis award in nanotechnology. He and Tom Baehr-Jones have worked together for more than 20 years. In his spare time, he enjoys photography, sporting clays, and writing about issues of policy and grand strategy.

What Makes Luminous Different

Luminous's proprietary integration of silicon photonics technology is a completely new approach to scaling chip capacity to accommodate the most sophisticated AI algorithms. It frees technologists from the restraints of data movement by leveraging high bandwidth optics technology, strategically positioned within the computer and system architecture, without trading programmability for performance. In doing so, Luminous is creating the systems of the future that are easier to use, require fewer engineering resources and less coding to make artificial intelligence a reality.

Target Audiences

- Potential Employees
    - Those who are excited to build something incredible and be a part of the Luminous mission to build the best AI in the world
- Investors
    - Those who are able to support Luminous's growth through direct funding
- Prospective Customers
    - Those who are tired of the status quo in the industry and are looking for the technology that will help them bring their wildest dreams to life
- Media
    - Semiconductor, tech (AI/ML) and business media who are looking to profile interesting companies who are solving big problems in their industries

Company Milestones
2018 - Luminous is founded by Mitchel and Marcus
June 2019 - Bill Gates backs Luminous (article linked)
July 2020 - Luminous starts fund raising for Series A (article linked)

March 3, 2022 - Luminous announces $105M Series A funding round (release linked)
March 16, 2022 - Luminous announces new president Michael Hochberg (release linked)
May 18, 2022 - Luminous is named to the 2022 CB Insights AI 100 List of Most Innovative Artificial Intelligence Startups (release linked)

Top Coverage

- Reuters - Chip startups using light instead of wires gaining speed and investments
- The Next Platform - LUMINOUS SHINES A LIGHT ON OPTICAL ARCHITECTURE FOR FUTURE AI SUPERCOMPUTER
- Morning Brew - A new startup thinks light is the key to building a next-gen supercomputer
- Crunchbase News - Luminous Computing The Latest AI-Startup To Attract Big Funding
- VentureBeat - Luminous Computing, which is developing a light-based AI accelerator chip, raises $105M