

Rain Neuromorphics Raises \$25M Series A to Transform Al Hardware Landscape

New funding to fuel growth of interdisciplinary team of engineers and researchers

SAN FRANCISCO, CALIFORNIA, UNITED STATES, February 2, 2022 /EINPresswire.com/ -- Rain Neuromorphics, the neurocomputing platform for artificial intelligence, including the world's first Neuromorphic Processing Unit (NPU)TM, today announced it has raised a \$25 million Series A, led by



Neuromorphic Processing Unit (NPU)

Prosperity 7 Ventures, joined by existing investors Buckley Ventures, Gaingels, Loup Ventures, Metaplanet and Pioneer Fund, among others. In addition to institutional venture funds, Rain has received angel investment from leaders in the fields of AI, robotics and software, including Sam Altman, co-founder and CEO of OpenAI, Jeff Rothschild, founding engineer of Facebook, Oliver

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Gordon Wilson, co-founder and CEO of Rain

Cameron, VP of Product at Cruise, Amar Shah, founding CEO of Wayve AI, and Scott Gray, Research Engineer at OpenAI, among others.

"I'm excited by Rain's progress on analog AI chips — they taped out a working prototype last year, which most companies require much more capital to do," says Sam Altman, who led Rain's seed round in 2018, prior to the company participating in Y Combinator. "Their neuromorphic approach could vastly reduce the costs of creating powerful AI models and will hopefully one day help to enable true artificial general intelligence."

Introducing the Neuromorphic Processing Unit (NPU)

Rain today also unveiled the Neuromorphic Processing Unit (NPU), the world's first end-to-end analog, trainable AI circuit. The NPU combines a new algorithm for analog AI training and

inference, known as Equilibrium Propagation, with a new analog chip architecture. The NPU is the only analog approach to AI which combines fundamental innovations in both algorithm and hardware technology, simultaneously speeding up processing and lowering power consumption. Implementation of an analog algorithm enables the NPU to be 1000x more energy efficient than today's best processors. The hardware architecture of the NPU utilizes memristors to combine memory and compute as artificial synapses, overlayed on top of the neuron circuits in a sparse pattern replicating the sparse connectivity of the brain, allowing tens of millions of artificial neurons to be interconnected on a single chip.

With inspiration for the NPU founded in natural intelligence, the long-term mission of Rain is to enable truly brain-like processors for Al. While this is an audacious goal, the flexibility of the NPU platform makes possible a product roadmap capable of addressing near and mid-term opportunities in both cloud and edge Al markets. The company taped out its first working prototype chip in 2021; the new funding will further accelerate progress along the product roadmap.

"At Rain, we are building an entirely new kind of microchip — a fully analog neural network where software and hardware merge into one elegant, massively parallel information processor. This is a bold project that combines many disciplines: circuit theory, physics, pure mathematics, neural network architectures, materials science, and even neuroscience," says Gordon Wilson, co-founder and CEO of Rain. "We are looking for curious individuals who love to think at the intersection of multiple fields to help us build a truly brain-like processor for Al. It's both challenging and thrilling to work on such a fundamental and potentially consequential technology."

Rain plans to triple the company this year, growing its multidisciplinary team of researchers and engineers across expertise spanning device physics, circuit architecture and design, software, and algorithms.

"Ten years ago, I decided to devote my life to understanding how the brain works," says Jack Kendall, co-founder and CTO of Rain. "My journey into this field has been less conventional than most, but that has allowed me to collaborate with some of the brightest minds across many disciplines, all with the goal of understanding the nature of intelligence. Our team views the brain as a physical circuit for processing information. This physics-based philosophy for AI uses analog circuits as a bridge between neuroscience, physics, and deep learning."

To view open roles at Rain, visit: https://rain.ai/careers

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