Quilee Simeon

Cambridge, MA — (210) 601-5018 — quilee.simeon@icloud.com
qsimeon.github.io — github.com/qsimeon — linkedin.com/in/quilee-simeon-7843a3178

EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA
M.S. Computational Neuroscience May 2025
B.S. Computation & Cognition; Minor in Statistics & Data Science June 2021
GPA: 4.9/5.0 *Selected coursework:* AI & ML, Deep Learning, Computer Vision, Probability & Statistics, Bioinformatics

TECHNICAL SKILLS

Languages	Python, Rust, Julia, TypeScript, Bash
ML / Data	PyTorch; Hugging Face (Transformers, Datasets); Weights & Biases
AI-native	Claude Code; OpenAI API, Anthropic API; Replicate, fal.ai; ElevenLabs; MCP servers (FastMCP)
Backend / Infra	FastAPI; Docker; Linux + Slurm (HPC); AWS (EC2); Google Cloud; Git
Product / Deploy	Replit; Lovable; Vercel; Railway; Supabase

PROFESSIONAL EXPERIENCE

Research Computing Technical Staff, MIT Office of Research Computing and Data Nov 2025–Present
- Facilitate research on MIT's supercomputing clusters by troubleshooting job scheduling (Slurm), containerization, and environment management for a user base of 3,000+ researchers.
- Collaborate with the Research Community Facing team to debug complex data analysis workflows in Python, Julia, and MATLAB, reducing average ticket resolution time.
- Teaching Assistant for workshops on parallel programming, GPU computing, CUDA, and distributed deep learning, supporting hands-on training for researchers using HPC and accelerator-based workflows.

Machine Learning Intern, Numenta, Inc., Menlo Park, CA Jun–Sep 2025
- Designed and tested machine learning experiments for brain-inspired large language model development, benchmarking across differences in model architecture and training hyper-parameters.
- Explored sparse training approaches to improve efficiency of LLMs on CPUs, achieving ∼2x inference speedup on emerging CPU-inspired and wafer-scale hardware.
- Built and evaluated an efficient LLM expansion pipeline preserving pretrained representations under parameter scaling, enabling faster convergence and projected 1.5–2× compute savings; implemented multi-GPU training, experiment tracking, and automated analysis.

Graduate Research Assistant, McGovern Institute for Brain Research, MIT 2022–2025
- Built end-to-end pipelines processing 1TB+ of high-dimensional neural data and trained models on HPC clusters.
- Designed and prototyped a custom remote focusing light-sheet microscopes, integrating optics and ML analysis.
- Created algorithms for unsupervised learning on neural datasets, streamlining high-dimensional data analysis workflows.

MIT-Brazil Remote ELO Intern, MIT International Science and Technology Initiatives 2020–2021
- Programmed artificial biomedical imaging applications with Albert Einstein Education and Research Institute.
- Applied computer vision techniques to analyze leukemia cell migration and interactions in response to chemotherapy, processing datasets of 500+ cell samples.

Bioinformatics & Software Development Intern, Triplet Therapeutics, Cambridge, MA 2019–2021
- Automated RNA sequence analysis pipelines using AWS EC2, scaling to 10+ concurrent instances to reduce processing time by 40% and accelerate drug discovery workflows.
- Deployed deep neural network models to predict siRNA/ASO knockdown efficacy, achieving 15% higher accuracy in candidate selection for rare neurological disorders.
- Developed an internal web application (PHP, HTML, CSS) to automate oligonucleotide formatting, applying vendor-specific rules for base modifications to streamline ordering.

TEACHING

Teaching, Lab Assistant & Tutor 2019 – 2023
- Supported MIT Fundamentals of Programming (200+ students) and multiple computational neuroscience subjects.

Instructor 2019 – 2020
- MIT Global Teaching Labs (Wales, South Africa) & SPISE: designed CS curricula and mentored students.

LEADERSHIP

- **IEEE–HKN, Beta Theta Chapter (MIT)** — Co-President
- **Theta Chi Fraternity, Beta Chapter (MIT)** — Secretary
- **MIT Black Student Union** — Social Chair

HONORS

- **1st Place Neural Decoding Challenge**, Precision Neuro BrainStorm BCI Hackathon 2026
- **Honorable Mention**, MIT SERC Envisioning the Future of Computing Prize 2025
- **Graduate Student Spotlight**, IEEE–HKN 2022
- **Oxford Rhodes Scholarship Finalist**, Commonwealth Caribbean 2021