Neud Estifanoes

neudestifanoes@gmail.com — (678) 577-1830 — GitHub — Website — LinkedIn

Education

Georgia Institute of Technology, Atlanta, GA *December 2026*
Bachelor of Science in Neuroscience / Computer Science Concentration (Computing & Intelligence)
GPA: *3.5 Cumulative*
Relevant Coursework: Data Structures & Algorithms, Computer Organization, Artificial Intelligence, Machine Learning, Computational Neuroscience, Linear Algebra, Management Statistics, Neural Systems, Methods in Neuroscience

Experience

The Murty Lab, Researcher, Atlanta, GA *Aug 2025 – Present*

- Modeled large-scale fMRI and electrophysiology datasets and applied encoding models to study neural coding and compare deep neural network (DNN) representations with biological neural responses.
- Optimized encoding models to improve Representational Similarity Analysis scores by 40% over baseline feature models.

SynapseX, Founder & President / Software Development Team Lead, Atlanta, GA *Oct 2024 – Present*

- Founded Georgia Tech's first Brain-Computer Interface organization, scaling it to 200+ members and leading the software team in developing real-time neural interface tools, research protocols, and internal engineering workflows.
- Designed and maintained end-to-end EEG processing and decoding infrastructure that achieved sub 500 ms end-to-end latency from visual stimulus to system response.
- Trained LDA classifiers on real and synthetic EEG data, achieving 95% accuracy in controlled multi-class SSVEP tasks.

NextGen Computing, Software & Web Developer Intern, Lawrenceville, GA *May 2025 – Aug 2025*

- Optimized OpenCV/FFmpeg-based media pipelines used across client facing applications serving 50+ clients, reducing video ingest-to-display latency by 35% through batching, efficient frame handling, and asynchronous execution.

Programming Projects

Cursor Vector Engine *Oct 2025*

- Designed and deployed an SSVEP based cursor control pipeline, decoding user attention across four stimulus frequencies with over 80% accuracy to enable thought-driven cursor movement.
- Achieved sub 700 ms end-to-end latency from visual stimulus to cursor movement by optimizing Welch PSD feature extraction, sliding window processing, inference, and frontend & backend communication.

Event-Driven RL Trading System *Jun 2025*

- Built an event-driven Deep Q-Learning trading system using spike based encoding and Shannon entropy features.
- Outperformed a naive rule-based baseline by 160× in cumulative return under identical backtesting conditions.

Leadership & Community Engagement

Phi Sigma Kappa Fraternity, Head of Social Media / Secretary, Georgia Tech *Jan 2024 – Present*

- Revitalized fraternity social media with 700,000+ interactions (1000x increase), driving record recruitment and election as Secretary within one semester.

Technical Skills

Languages: Java, Python, JavaScript, C, Assembly Language, Bash, HTML/CSS
Frameworks: Node.js, Express.js, Django, Flask, ReactJS, React Native
Developer Tools: VSCode, IntelliJ, Sublime Text, Git, Docker, PyCharm, SLURM, Android Studio
Libraries: Pandas, NumPy, PyTorch, TensorFlow, OpenCV, OpenAI API, WebSockets
Databases: MongoDB, PostgreSQL, SQL, SQLite

Additional Skills & Interests

Languages: English (Native), Tigrigna & Amharic (Fluent), Arabic & Dutch (Intermediate)
Honors: Student of the Year (Grayson Tech, 2022), VFW Voice of Democracy Scholarship (Loganville Winner), Dean's List (6x), Zell Miller Scholarship, Live Like Paul Scholarship (Fall 2025)
Hobbies: Soccer, EDM, Film Enthusiast