

# Neud Estifanoes

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## 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/electrophysiology datasets and applied RSA/encoding models to study neural coding and compare DNN representations to biological responses.
- Built Python pipelines for preprocessing, feature extraction, and high-dimensional neural data analysis.

**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 (filtering, PSD/Welch, channel/event handling, feature extraction) using Python, PyTorch, NumPy, and MNE, enabling closed-loop tests and rapid iteration across multiple experimental paradigms.

**NextGen Computing, Software & Web Developer Intern**, Lawrenceville, GA

*May 2025 – Aug 2025*

- Developed full-stack web applications and software tools for 50+ clients using JavaScript, Python, and SQL; Implemented media-handling modules (OpenCV/FFmpeg) and visual dashboards to improve usability and reduce latency by 35%.

## Programming Projects

**Cursor Vector Engine**

*Oct 2025*

- Developed a full-stack SSVEP cursor-control system, featuring a React UI for directional visual stimuli and a FastAPI backend that extracts Welch-PSD features and applies LDA/SVM classifiers to decode EEG signals in real time.
- Built a modular real-time pipeline connecting the frontend, backend, and data streamer, enabling smooth interaction, rapid evaluation of ML models, and future integration with physical EEG hardware for live cursor control.

**Brain-Inspired Stock Trader**

*June 2025*

- Developed Deep Q-Learning agent using spike-train encoding and entropy-based feature extraction.
- Achieved 160× ROI over baseline; produced reusable modular analysis pipeline.

## 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, SQL, 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