

# Vinh Pham

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## Education

### Georgia Institute of Technology

B.S. in Computer Science | John H. Martinson Honors Program Scholar

Expected Graduation - May 2028

GPA: 4.0/4.0

- **Completed Coursework:** Data Structures & Algorithms, Object Oriented Programming, Discrete Math, Linear Algebra
- **Planned Coursework:** Perception & Robotics, Design & Analysis of Algorithms, Computer Organization & Programming
- **Languages:** Python, Java (Proficient) | JavaScript, C, MATLAB, React (Familiar)
- **Skills:** PyTorch, TensorFlow, scikit-learn, OpenCV, NumPy, Pandas, Flask, Matplotlib, SciPy | Git, VS Code, Linux

## Work Experience

### Applied Research Laboratories - University of Texas at Austin

June 2025 - August 2025

Student Research Assistant

- Designed an experimental study to evaluate dynamic variability in 180+ additively manufactured beams under Dr. Christina Naify
- Hypertuned laser Doppler vibrometer using MATLAB to achieve 95%+ testing precision, a 30% improvement over prior methods
- Enhanced curve-fitting optimization runtime by 50%, accelerating statistical analysis to drive research conclusions and publication

### Dell Technologies

February 2025 - May 2025

Software Engineer Intern

- Engineered an LLM-powered robot that converts speech into Mermaid diagrams, facilitating subject visualization and discussion
- Developed LLM prompts to automate diagram generation and ensure consistent G-code syntax for precise, reliable motor control
- Optimized dual-LLM processing with RAG, reducing runtime by 80% to enable real-time demonstrations for Dell executives

### GameRun AI

December 2024 - February 2025

AI Consultant

- Directed UI/UX enhancements by researching 20+ AI video analysis companies to create customer-centric data visualizations
- Refined LLM with AI agents to reduce hallucinations and improve automated coaching feedback for sports motion analysis

### SportzMate

May 2024 - August 2024

Product Development Team Lead

- Led a team of 6 interns on integrating AI capabilities into the company's new "Player Performance Tracking" in-app product
- Supervised Figma prototyping and redesign of 50+ screens, improving UI/UX for feature validation and initial consumer testing

## Projects

### AI-Powered Prosthetic Arm - Georgia Institute of Technology

August 2025 - Present

AI/ML Engineer - GT Medical Robotics Club, Team Limbo

- Building an end-to-end unsupervised autoencoder pipeline to map EMG signals to 6D gesture vectors for prosthetic arm control
- Developed real-time computer vision gesture tracking with OpenCV/Mediapipe to generate ground truth labels for model training

### SmartPathAI - Georgia Institute of Technology

August 2025 - Present

Software Engineer - Big Data Big Impact

- Built ML-powered adaptive learning platform with GraphRAG and reinforcement confidence modeling, serving 20k+ GT students
- Architected a RAG pipeline to classify PDFs via OpenAI embeddings and generate subject-specific knowledge graph connections
- Designed personalized learning with Neo4j confidence tracking, temporal decay, and adaptive difficulty to optimize study efficiency

### Brain-Computer Interface System - Georgia Institute of Technology

September 2025 - Present

Backend & ML Pipeline Engineer - SynapseX

- Engineered a brain-computer interface converting SSVEP EEG signals to cursor control via ensemble LDA/SVM classification
- Applied weighted FBCCA feature extraction with RandomizedSearchCV hyperparameter optimization to achieve 95.7% accuracy

### Machine Learning for Health & Social Data - University of Texas at Dallas

May 2024 - August 2024

Student Researcher

- Developed Python-based AI models using TensorFlow, scikit-learn, and Pandas: trained a CNN on MNIST at 97.24% accuracy, constructed an LSTM for social media sentiment analysis, and built decision trees to predict diabetes onset at 94.2% accuracy

## Leadership

### Project 1600

May 2023 – Present

Founder

- Established an affordable SAT mentorship program with personalized curriculum, raising scores by 160+ points for 15+ students
- Designed website UI to manage student enrollment, live curriculum scheduling, and tutor recruitment, generating 320+ visits

### Distributive Education Clubs of America (DECA)

August 2022 - May 2025

Vice President of Competition

- Mentored 150+ chapter members in business consulting and career preparation sessions, growing club membership by 40%
- Established a mentor team system and mock competitions, increasing qualification for the international conference by 20%