Colin Vu

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EDUCATION

Georgia Institute of Technology **Atlanta, GA**

B.S. / M.S. in Computer Science, Minor in Industrial Design *August 2022 – May 2027*

- **GPA:** 4.0/4.0, *Dean's List, Faculty Honors*
- **Concentrations:** Media/Graphics (B.S.) & Modeling/Simulation (B.S. & M.S.)
- **Coursework:** Algorithms, Data Structures, Computer Architecture, Computer Networks, Statistics, Human Centered Design, Computer Graphics, Machine Learning, GIS, Information Visualization, Computer Animation, Ubiquitous Computing

SKILLS AND AWARDS

Languages: Java, Python, JavaScript, TypeScript, C++, C#, C, HTML, CSS, SQL, Android XML, MIPS Assembly, Swift
Frameworks/Libraries: React, Node, LangChain, PyTorch, Pandas, NumPy, OpenCV, Pixi, Scikit-Learn, Junit, TailwindCSS, Whisper
Tools: Git, AWS EC2 & Route 53, Docker, Jupyter, Jira/Confluence, Figma, SVN, Postman, ArcGIS, Unity, Blender, Tableau
Awards: Bronze Palm Eagle Scout

EXPERIENCE

Seraphine Glass **San Francisco, CA**

Founding Engineer *April 2025 – August 2025*

- Founding engineer building augmented reality glasses with a built-in AI remembrance agent/lifestyle manager.
- Built prototypes with various APIs for seamless compatibility w/ device input & data (LangChain, Whisper, Google Places, NWS, GPT). Backend hosted via AWS S3 & Route 53.
- Secured $155,000 in pre-seed funding from Fusen and the Georgia Tech Startup Exchange.
- Attended business meetings with 10+ VCs to discuss funding and 5+ manufacturers to negotiate hardware needs and develop a supply chain. Built TikTok and Instagram pages for marketing content, averaging 1,000+ organic views per video.

American Gaming Systems **Duluth, GA**

Full-Stack Software Engineering Intern *May 2024 – August 2024*

- Developed a client-facing UI interface for casino managers to modify slot machine game assets, programmed in Pixi, Node.js, and React.js using Agile principles. Managed tasks and created documentation in Jira/Confluence.
- Led design and integration of the program to connect the front-end interface with internal APIs, diagramming the class framework with Figma and Miro. Developed back-end infrastructure in JavaScript and TypeScript.
- Wrote unit tests with C++ RESTful APIs to ensure the successful interplay of real-time events with the front-end UI.
- Delivered project demos to business team and CTO as proof of concept to modernize future trajectory of engineering team.

Georgia Tech Research Institute – Vertically Integrated Projects **Atlanta, GA**

Undergraduate Research Assistant *August 2023 – December 2024*

- Developed Geographically Weighted Regression (GWR) algorithms to assess the impact of infrastructure projects on GHG emissions, employing MySQL to clean and standardize the large traffic datasets analyzed.
- Utilized Prithvi, a NASA/IBM geospatial intelligence tool, to analyze satellite data and predict future cropland conditions in Ukrainian towns. Received a Request of Information (ROI) from the Federal Register to document the work for public policy.

PROJECTS

Field Goal Projection – HackGT12 Winner | *OpenCV, SciPy* *September 2025*

- Built a CV system that tracks a football in TV footage and projects its 3D coordinates (calibrating for camera movement) to calculate field goal distance. Integrated CSRT tracking, Kalman filtering, HSV isolation, and homography-based calibration.

NBA Outcome Model | *Jupyter Notebook, PyTorch, Scikit-learn* *March 2025 – April 2025*

- Developed an end-to-end ensemble pipeline combining LSTM, Neural Networks, Random Forest classifiers, and Collaborative Filtering techniques to forecast NBA game results from box score metrics and team ranking histories.
- Surpassed market benchmarks, achieving a 52% win rate against official NBA betting lines.

County Buddy (Friendly Cities Research Lab) | *Jupyter Notebook, ArcGIS* *August 2024 – Present*

- Processed federal demographic datasets in Python and ArcGIS to curate geographic datasets for use by journalists and researchers. Wrote and published a paper to document the datasets.
- Published via Harvard Dataverse and requested by/sent to *The New York Times*, 20+ downloads.

ML False News Detection Model | *Jupyter Notebook, NumPy, Pandas* *June 2023*

- Logistic Regression & Natural Language Processing (NLP) model to predict the likelihood of an article being fake news. Used Bag of Words (BoW) for feature extraction, GloVe word embeddings to analyze sentiment. Final confidence interval 97%.