DANIEL HUYNH

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EDUCATION

University of Virginia, School of Engineering and Applied Sciences, Charlottesville, VA   *August 2021 - May 2024*
Bachelor of Science in Computer Science
- GPA: 3.98 / 4.0
- Relevant Coursework: Machine Learning, Artificial Intelligence, Software Development, Web Applications, Computer Systems & Organization, Data Structures & Algorithms, Cybersecurity, Data Science w/ R, Physics 1&2, Statistics, Linear Algebra

SKILLS

- Languages: Java, Python, C, JavaScript, React, SQL, R, C++, Assembly, C#, MATLAB, PHP, Typescript
- Software: Git, Docker, AWS (EC2, RDS, Lambda), MySQL, PostgreSQL, Heroku, Autodesk, Gradle, Splunk, Ansys STK
- Systems: Windows, MacOS, UNIX, LINUX, Solaris
- Libraries: scikit-learn, Flask, Django, React, Matplotlib, Angular, PyTorch, JUnit, JavaFX, TensorFlow, NLTK, BeautifulSoup

EXPERIENCE

Application Engineering Intern, **Ansys,** Exton, PA   *May 2023 – August 2023*
- Developed software to simulate, compute, and make calculations upon communication access data from constellation of satellites to ground facility antenna, requiring an efficient algorithm due to large scale of data/simulation. **Script and simulation adopted by a major telecommunications company and integrated in the next version of STK release.**
- Designed and built software to convert between LK files into FFD antenna files for compatibility with STK software, **merged/integrated in next version of STK release.** Researched 3D file format types as part of intern project.
- Designed and built user interfaces (C#), automation scripts (Python), and integration code to modify Ansys Systems Tool Kit (STK) software for customer applications, specifically those in aerospace engineering research, design, and mission planning

Research Assistant, **Floodwatch Project at University of Virginia,** Charlottesville, VA   *May 2023 - Present*
- **Head researcher and developer of LiDAR-based sensors** used to map flooding in cities, funded by *National Science Foundation*. Program sensor device hardware with **Arduino**, using C/C++. Build and maintain public API written in Python.
- Build and maintain the pipeline of data collection from LoRa IOT sensor devices to gateway to project databases hosted on AWS EC2/S3 as part of Hardware team. Utilized AWS Lambda and AWS RDS for pipeline. Experienced in embedded systems.

Researcher and Subteam Lead, **CliniVision,** Charlottesville, VA   *September 2023 - Present*
- Head of Diagnosis subteam, use PyTorch library capabilities on medical imaging, X-rays to detect anomalies against healthy patients, and diagnose medical conditions using image processing neural networks.
- Spearhead development for team as scrum master, use **Scrum** to develop product backlog, sprints for student-led research project

Teaching Assistant, **UVA CS3100 (Algorithms) & CS2130 (Computer Systems),** Charlottesville, VA   *August 2022 – May 2023*
- *DSA2*: Led office hours and discussions to teach: algorithms for graph traversal (BFS, DFS, Dijkstra's, Prim's, Kruskal's), greedy algorithms, dynamic programming, recursive relations, proofs, machine learning algorithms, P/NP/NP-C proofs, runtime analysis
- *CSO1*: Direct student learning for coding in C, computer architecture, x86, computer memory structure, logic gates, writing Assembly language, command prompt, Linux, SSH, IP, and version control using Git. Led lab sections of ~100 students.

Executive Board and Developer, **Project Code (UVA CIO),** Charlottesville, VA   *January 2022 - Present*
- Spearheaded *Stock Market Bot* project using **Scrum** methodology: utilized natural language processing NLTK library and ML models to train models, make predictions based on live stock market data and scraped news headlines concerning stock market trends, implemented with Python backend and Beautiful Soup to scrape data, using Firebase for our database.
- Implemented frontend with React (JS, JSX), Node.js to display data results of backend analysis, integrated with Flask.

PROJECTS

- *BudgetBuddy*: **Winner of Capital One's Best Finance Hack at UVA HooHacks 2023**: built frontend in JS/CSS/HTML, backend in Python, integrated with Flask. Allows user to connect/share access to bank account transaction history and data with Plaid API, make budgeting plan, see current spending analysis on a dashboard, and communicate on mobile with app's chatbot through SMS texts for advice whether to make purchases, see current progress, or for financial advice, using Twilio and GPT API.
- *HooEvents:* A social app for students to post, connect, and find events, locations, and event times at UVA. I was responsible for login with Google OAuth, pin locations and find directions to events with Google Maps API, managed the PostgreSQL database and migrations to Heroku server. Application built with Django. Used GitHub Actions to manage CI and automate testing.
- *Enrollment Application*: Designed and developed student enrollment application allowing school administrators to enroll students, search class information to register students, and keep track of student progress and activities. Used Java and JavaFX as the programming language, styled with CSS, and implemented with Apache Derby as the database backend, using SQL queries.
- *Stock Market Bot*: as part of Project Code—React/Node.js frontend, Python backend utilizing Flask.

ACHIEVEMENTS

- University of Virginia SEAS Dean's List: Fall 2021, Spring 2022, Fall 2022, Spring 2023
- National Merit Commended Scholar (Class of 2021)