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), VSCode, MySQL, Autodesk, Gradle, Splunk, Ansys STK & Discovery
- Systems: Windows, MacOS, UNIX/LINUX, Solaris
- Libraries: scikit-learn, Flask, Django, React, Matplotlib, Angular, PyTorch, JUnit, JavaFX, TensorFlow, NLTK, BeautifulSoup

EXPERIENCE

Intern,* Ansys,** Exton, PA ***May 2023 – August 2023

- 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
- Developed program to simulate, compute, parse, 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 and used by a major telecommunications company and integrated in the next version of STK release.**
- Designed and implemented program 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.
- Report analyses and design technical solutions to solve aerospace mission design challenges from leading top industry corporations in aerospace, using physics and STK simulation, developing expertise in STK and other Ansys simulation software

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 servers and databases hosted on AWS EC2/S3 as part of Hardware/DevOps team. Utilized AWS Lambda and AWS RDS for pipeline

Researcher and Subteam Lead,* CliniVision,** Charlottesville, VA ***September 2023 - Present

- Lead the Diagnosis subteam, use PyTorch library capabilities on medical imaging such as X-rays to detect anomalies against healthy patients, and diagnose medical conditions using image processing neural networks.
- Organize team as scrum master using **Scrum** to develop product backlog and organize 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***: Teach and answer student questions 1 on 1 involving coding in C, computer architecture, computer memory structure and gates, writing Assembly language, command line and uses of the command prompt, using Linux, SSH, and version control using Git. Led large lab sections (around 100 students), organized and prepared lab assignments, graded exams, projects, homework.

Executive Board and Developer,* Project Code (UVA CIO),** Charlottesville, VA ***January 2022 - Present

- Developed on ***Stock Market Bot*** project using **Scrum** methodology: utilized natural language processing APIs and ML models to train models to make predictions based on live stock market data and news headlines concerning stock market trends and specific companies, implemented with Python backend and Beautiful Soup to scrape data, Firebase for database.
- Implemented frontend with React (JS, JSX), Node.js to display data results of backend analysis, integrated with Flask. In charge of GitHub for project and assisted in problems with Git due to prior experience with Git

PROJECTS

- ***BudgetBuddy***: **Winner of Capital One's Best Finance Hack at UVa HooHacks 2023**: web app, 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 (uses Twilio and GPT API)
- ***Weather Application***: Web app written with React, styled with CSS, allowing a user to enter in a location name and see displayed weather data for that location. Uses online APIs to convert from location name to longitude and latitude, and load weather data.
- ***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 to integrate/route

ACHIEVEMENTS

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