Andrew Tran

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EDUCATION

Virginia Polytechnic Institute and State University (Virginia Tech) | *Blacksburg, VA*   **Spring 2024**
B.S., Computer Science | Minor: Mathematics   *Cumulative* GPA: 4.0 / 4.0 | *In-Major* GPA: 4.0 / 4.0
M.Eng., Computer Science and Applications   **Spring 2025**

Relevant Courses: Computer Systems, Machine Learning I, Android Mobile Software Development, Data Analytics and Visualization, Intro to Database Management Systems, Data Structures and Algorithms

SKILLS

Java, Python, C, Kotlin, HTML, CSS, JavaScript / TypeScript, XML, SQL, Three.js, Vite, MongoDB, Express.js, Node.js, React.js, Angular, Swift, Cypress.io, Swift, REST APIs, R (Limited), x86-64 / RISC-V Assembly, Git, Visual Studio Code, Eclipse, Android Studio & Jetpack, Jupyter Notebook, Linux / MacOS / Windows, Microsoft Office

EXPERIENCES

Capital One Internship (Technology Intern Program) | *McLean, VA*   **Jun. 2023 – Aug. 2023**
Software Engineer Intern
- Developed the Map-Your-Spend Application (React.js), allowing current and prospective Capital One customers to select their personal spending categories and receive dynamic recommendations to encourage saving.
- Redesigned the UI of the Wi-Fi-Landing Page (React.js) and the functionality of the Digital Coffree Cards in the Ambassador-Powered Experience (APEX) Application (Swift), both utilized at Capital One Cafés & Branches to personalize and enhance the in-person and customer-oriented experiences.

Zeta Associates Inc. Internship | *Fairfax, VA*   **May 2022 – Aug. 2022**
Software Developer Intern
- Developed a basic understanding of Kubernetes Clusters and Linux Containerization.
- Researched and implemented the newest applications of Unikernels, a specialized, single-address space machine image created by using only required OS libraries to reduce file size and increase performance.
- Designed a containerized DSP Spectrogram Application (with audio-processing functionality) on a Kubernetes Cluster using Three.js, a JavaScript Library / API used for rendering 3D computer graphics on Internet browsers.

PROJECTS

Nail-Salon Database Management System   **Aug. 2023 – Dec. 2023**
React.js, Typescript, Java Spring MVC Framework, SQLite
- Designed a full-stack system for a local nail-salon business to handle booking appointments, manage customer, and employee information, display business analytics, and report customer statistics.
- Handled the integration of the frontend and backend through owner/employee/customer form creation, managed input data validation, passed data from the frontend to the backend (and vice-versa) via Axios, structured columns returned from the DBMS in the backend via Java classes, and stored formatted user-data into the SQLite database.
- Created the Managerial (Owner/Employee) and Customer Dashboards to allow end-users to have a UI-oriented rather than a programmer-oriented experience while navigating the application.

Llama.cpp Integration into CS Genome Website (Undergrad Research Initiative)   **Aug. 2023 – Dec. 2023**
Python, Next.js, TypeScript, Linux Bash-Scripting
- Worked with a recently developed AI Large-Language-Model (LLM) called LLaMA.cpp (from MetaAI), researching its capabilities in Natural Language Processing (NLP) through prompt engineering and analyzing speech responses.
- Integrated a full-stack (Chat-GPT-like) solution onto the CS Genome front-end website, allowing for responses such as the CS Genome processor descriptions as well as user-based queries regarding high-performance (secure) computing to be answered and powered by this AI LLM model.

Other Projects: ML Exploratory Blog Posts (Jupyter Notebook / Angular), SASE Website – Webmaster (HTML / CSS / JS / Vite), We Suck at Cooking Mobile App (Kotlin), Auditory Assistant (HTML / CSS / React.js), VT Alert Forwarding Discord Bot (Python), Twitter Activity Data Analysis (Jupyter Notebook), Graph Theory: Cycle Detection Program (Java)