Phat Cao

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EDUCATION

Virginia Tech   **Expected May 2025**
Bachelor of Science in Computer Science – GPA: 3.56   *Blacksburg, VA*

Relevant Coursework:

Data Structures and Algorithms, Artificial Intelligence, Database Management Systems, Web Development, Computer Graphics, Computer Network Architecture, Computer Systems

PROFESSIONAL EXPERIENCE

Virginia Tech   **May 2023 – Present**
Undergraduate Teaching Assistant   *Blacksburg, VA*

- Guided over 100 students by hosting office hours, troubleshooting issues, and providing tailored academic support.
- Facilitated interactive discussions through online forums, achieving a 90%+ student satisfaction rate.
- Supported instruction for Computer Organization, Computer Systems, and Comparative Languages, focusing on C, x86, RISC-V, operating systems concepts, and multi-language paradigms.

Peraton   **Aug 2024 – Dec 2024**
Software Engineering Co-op   *Blacksburg, VA*

- Contributed to a cyber-threat intelligence platform for detecting attacks, managing malware, and mitigating risks.
- Optimized the CI/CD pipeline by updating Docker Compose configurations, reducing deployment time by 20%.
- Diagnosed and resolved Maven build issues and Java test failures, increasing pipeline reliability by 25%.
- Strengthened system performance by addressing over 100+ security vulnerabilities through dependency updates.
- Collaborated using Agile methodologies and GitLab to document and resolve 20+ functionality issues.

Card Isle   **Sep 2023 – Nov 2023**
Front-End Developer Intern   *Blacksburg, VA*

- Upgraded the company's website by adding new features and improving layouts to enhance user engagement.
- Redesigned UI elements like search bars, buttons, and layouts using Alpine.js, boosting usability by 30%.
- Conducted testing using Playwright, achieving 90%+ test coverage and reducing functionality bugs by 20%.

RESEARCH EXPERIENCE

Rural Trash Collection   **Jan 2024 – Dec 2024**
Virginia Tech IDPro   *Blacksburg, VA*

- Led a team to automate a trash collection robot using machine learning and robotics to improve efficiency.
- Coordinated bi-weekly VDOT meetings to gather requirements, ensuring the solution reduced labor by 20%.

Smart Research   **Aug 2023 – Dec 2023**
Virginia Tech IDPro   *Blacksburg, VA*

- Developed a Python script on Raspberry Pi to scan RFID tags and enable device connection to the hub.
- Integrated the hub with a Swift-based app, allowing users to control connected devices remotely.

PROJECTS

Simplisplit | *React native, Flask, Python*   **Sep 2023**

- Developed a group payment app with React Native, integrating Veryfi API and Flask for data extraction.
- Streamlined payment requests via Venmo API, reducing manual calculations and enhancing user convenience.

Food Swipe | *React.js, Google APIs*   **Nov 2022**

- Created an interactive swiping-based web app for restaurant discovery, utilizing React and TypeScript.
- Leveraged Google Geolocation API to fetch local restaurant data based on user location.

TECHNICAL SKILLS

Programming & Assembly: Java, JavaScript, Python, C, HTML/CSS, RISC-V, x86
Frameworks & Libraries: React.js, Vue.js, Tailwind CSS, Playwright, Alpine.js, Flask, JUnit, Node.js
Databases: SQL, MySQL, MongoDB, MySQL WorkBench
Tools & Technologies: Git, Unix/Linux, Docker, REST API, Postman, Google APIs, Maven, VSCode, Eclipse