

Alan Zhang



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[azhang03](#)



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[Portfolio](#)

EDUCATION

University of Maryland - College Park

Expected May 2025

Bachelor of Science in Computer Science (3.63 GPA)

College Park, MD

- **Relevant Coursework:** *Data Structures, Algorithms, Artificial Intelligence, Object-Oriented Programming, Parallel Computing, Design/Analysis of Computer Algorithms, Compilers*

PROJECTS

Web Portfolio | Next.js, GSAP, Sass, JavaScript

[Web Portfolio Link](#) | [GitHub Link](#)

- Developed a dynamic online portfolio using Next.js to showcase full-stack development projects, technical skills, and relevant experience.

StreamerTracker TFT | Python, Flask, PostgreSQL, Next.js, GSAP

[Website](#) | [GitHub Link](#)

- Developed a specialized tracking application for Teamfight Tactics streamers using Next.js, showcasing statistics and updates on streamer match history, team compositions, augments, and more.
- Utilized Python and Flask to handle backend processing, managing intricate data interactions and providing API for frontend consumption.
- Integrated Neon for PostgreSQL database management, optimizing data storage and retrieval to efficiently handle streamer statistics and user requests.

Intrusion Detection System (IDS) | Spring Boot, Java, Axios, Next.js

[GitHub Link](#)

- Developed a full-stack Intrusion Detection System (IDS) with a Spring Boot backend and Next.js frontend, allowing users to track, manage, and analyze potential security threats.
- Designed and implemented RESTful API endpoints for adding, retrieving, updating, and deleting threats, improving system efficiency and data integrity.

Topflight Tracker | Next.js, GSAP, Axios, Sass, JavaScript, Redis

[Topflight Tracker](#) | [GitHub Link](#)

- Developed a comprehensive football tracking application using Next.js, displaying real-time standings, fixtures, and results for top European leagues.
- Integrated Redis for caching API responses, reducing redundant API calls and improving load times by storing league data and news updates for a defined period.

EXPERIENCE

Research Assistant Intern

Aug. 2024 – Dec. 2024

@Temple University

Remote

- Engaged in academic research related to Software-Defined Networking (SDN), focusing on the separation of control and data planes, enhancing network flexibility, and understanding SDN's role in simplifying complex network configurations.
- Reviewed recent advancements and challenges in SDN technologies such as programmability, flexibility, and control-plane centralization, highlighting areas for further research and practical implementations.

Software Developer Intern

April 2024 – Aug. 2024

@MindHome

Remote

- Led important enhancements to the company website, implementing high-performance UI updates and feature optimizations using React and React Native, improving both web and mobile experiences.
- Developed and optimized key components of React applications, proactively identifying and resolving performance bottlenecks to elevate user experience and efficiency.
- Drove collaboration with fellow interns, providing technical insights and guidance that directly contributed to streamlined development processes and higher-quality project outcomes.

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, Python, Java, SQL, C++

Web Technologies: React.js, Next.js, Node.js, GSAP, Tailwind CSS, Three.js, HTML, CSS, Hooks API

Database Technologies: SQL, MySQL, PostgreSQL, MongoDB, Redis

Software and Tools: MATLAB, RStudio, TensorFlow, PyTorch, Pandas, NumPy, Git, GitHub, GitLab, AWS, Docker, Microsoft Office, Excel