

Alexander DuPree

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Professional Summary

Dynamic and detail oriented Software Engineer and Army veteran with experience in designing, developing, and testing software systems. Proven work-ethic that has been tested in diverse work environments with strong leadership and interpersonal skills. Inquisitive individual with a passion for learning and experimenting with new tools and technologies.

Education

Portland State University - Portland, Oregon

Bachelor of Science in Computer Science, Graduated June 2021 - *Summa Cum Laude*

- Portland State Aerospace Society member, developed unidirectional communication software for the OreSat project to enable receiving data from distances of over 400km.
- Developed and implemented Forward Error Correcting strategies to enhance packet recovery capabilities over 802.11 wireless transmission
- Leveraged packet injection and capture with C software libraries to send and receive arbitrary data without the need for a network connection.
- Developer and owner of <https://playbattleship.com>, a full-stack web application built with React, Typescript, Socket.io and deployed with Google's Cloud Run serverless platform.

Work Experience

Garmin - Salem, Oregon

Software Engineer Intern, March 2020 - September 2020

- Developed safety-critical C code in a collaborative environment to execute on the Garmin Touchscreen Navigator's (GTN) real-time operating system.
- Researched and generated clear and testable requirements for multiple user facing features on the GTN
- Rebuilt Waypoint search functionality to leverage multi-threaded communication and resource sharing to enable a responsive user experience.
- Redesigned the data interface for the Traffic Collision Avoidance Device to ensure proper handling of real-time data between multiple processes.
- Utilized critical thinking and investigative software techniques to fix upwards of 23 bugs and report 13 more.

U.S. Army - United States

Infantry Squad Leader, January 2011 - June 2017

- Managed the troubleshooting and application of digital fire direction control systems, hardware, and peripherals to enable timely and accurate indirect fires.
- Appointed and maintained a DOD security clearance level of Secret. Handled sensitive documents and radio encryption keys.
- Trained and mentored a Mortar section of over eight Soldiers on gunnery tasks and drills, resulting in a rating of Expert Gunner for all members. .

Technology Summary

Each category is ordered by level of proficiency

- *Languages*: C, C++, Rust, Typescript, HTML, CSS Python, SQL, Haskell
- *Tools*: Git, Docker, CMake, GCC, GDB, GCP, AWS, GitHub Actions, CircleCI
- *Platforms and Frameworks*: Linux, Windows, React, Flask