Aidan Van Duyne

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Education

University of California, Los Angeles **Expected June 2026**

B.S. in Computer Science and Engineering GPA: 3.8/4.0

Relevant Coursework: Data Structures and Algorithms, Operating System Principles, Software Construction, Computer Organization, Algorithms and Complexity, Linear Algebra, Discrete Structures

Activities: Upsilon Pi Epsilon, Association for Computing Machinery, Linux Users Group

Experience

The DiSTI Corporation **Orlando, Florida**

Software Engineering Intern June 2024 – September 2024

- Researched, architected, and implemented new monorepo configuration through migrating 12 individual repositories
- Sped up CI/CD build process by 77%, through caching and parallelization, utilizing the same number of CPUs
- Developed custom Docker containers and implemented GitLab CI/CD pipeline to simultaneously build multiple projects
- Cut external package usage 50% by refactoring redundancies to meet CVE requirements for a classified environment
- Wrote developer on-boarding manual for switching from previous internal tooling to new GitLab, Docker, and Git based tooling for developer workflows and build processes

Software Engineering Intern June 2023 – September 2023

- Supported AI development team by capturing requirements in, testing, and delivering feedback
- Developed customer facing features for helicopter virtual maintenance trainer in Unity with C#
- Tested new internal tooling. Identified, documented, and helped fix an average of 5 critical bugs per month

Projects

Typeracer | *Golang, Networking, Terminal User Interface*

- Designed type racing game where multiple players SSH into a Linux server and the first person to type the text wins
- Implemented networking system to have real time feedback of other players over a UDP connection
- Created an aesthetically pleasing and responsive terminal user interface by using the BubbleTea front-end library

Reverse Polish Notation Calculator | *Haskell, Functional Programming*

- Created RPN calculator using Haskell and the Brick front-end library with features like creating variables
- Learned functional programming concepts such as monads, currying, lazy evaluation, and state management

Robot Scouting App (Fullstack Mobile App) | *Flutter, Android, Apps Script*

- Designed and created a Flutter app that recorded over 1000 performances of FRC robots
- Organized and saved the data of these robots by using the Apps Script API as a backend
- Provided accurate predictions for the alliance selection process to give our team a competitive edge

UNIFIT (Fullstack Website) | *ReactJS, NodeJS, MongoDB, ExpressJS, Material UI*

- Developed a platform for university students to rent, buy, and sell clothes to/from their piers on college campuses
- Spearheaded UI/UX development, integrating Material UI for aesthetics and created templates for all user forms

Skills

Programming Languages

- **Proficient:** Python, C/C++, C#, Golang, Java, Kotlin
- **Familiar:** Haskell, Ocaml, Dart, Nix, Rust, Lua, JavaScript/React, Bash

Linux

- Over a year of daily driving NixOS, a declarative OS designed for reproducibility and portability. Additional experience in distros such as Arch Linux, Debian, and Fedora
- Compiled and used kernel with a custom realtek audio patch and applied SSDT patch in order to fix audio issues
- 5 years of experience using Unix/Linux CLIs including experience with creating terminal user interfaces, and CLI tools

FRC Robotics

- Designed and implemented autonomous path following, a hierarchical state machine, and computer vision systems
- Earned 1st place at the Orlando, FL Regional and competed at the World Championship in Houston, TX