

Brandon Wees

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EXPERIENCE

Lead Developer

September 2023 – Present

Maroon Rides

College Station, TX

- Developed a native iOS and Android app for accessing the Texas A&M University bus system
- Designed an intuitive user interface with accessibility and simplicity in mind
- Implemented TAMU Bus API (REST) to gather data for display in app, type-checked data with Zod
- Implemented GitHub Actions to streamline deployment to Apple App Store and Google Play
- Gained over 16,000 downloads since release in January 2024, averages 4,000 daily active users
- Technologies: TypeScript, React Native, REST, Zod, Zustand, Fastlane, GitHub Actions, TestFlight
- App is completely open source (AGPL 3.0): github.com/Maroon-Rides/MaroonRides

Robotics Software Intern

June 2024 – August 2024

Lab37 Robotics

Pittsburgh, PA

- Developed software in C++ and VueJS to operate a line cook robot for use in delivery kitchens
- Designed new control interface elements in VueJS and JavaScript to surface important information to user
- Integrated Mixpanel interface usage metrics to identify operator confusion and UI improvement areas
- Built an end-to-end voice control pipeline for the robot in C++ with OpenAI Whisper technologies
- Developed multiple subsystems in C++ for improving robot efficiency and monitoring/reporting robot status
- Read an in-depth writeup of my experience and some of my projects there: bwees.io/blog/lab37-internship
- Winter 2024: Designed and built programming stand for thermal probes, migrated VueJS codebase to TypeScript

Project Manager

August 2022 — June 2023

BotsIQ Combat Robotics Team

Pittsburgh, PA

- Designed and manufactured a 15-lb combat robot to compete with 50 other schools in Pittsburgh
- Managed team of 6 contributors and implemented Trello project management tools for organization
- Designed in Fusion 360 and wrote multiple CAM toolpaths and operated a HAAS TM-1P CNC Mill
- Completed multiple technical drawings for manufacturing of some parts by industry partner: JV Manufacturing
- Finished 1st place at Regionals, 4th place at States, and 1st place at 2024 SXSWS Battlebots League

PROJECTS AND LEADERSHIP

Staff Member

September 2023 — Present

Starforge Foundry Makerspace

College Station, TX

- Help lead day-to-day operations of the only public makerspace in College Station, TX
- Organized member lists, 3D Printing requests, staff to-do lists, purchasing lists, and other processes within Notion
- Developed serverless API with Cloudflare Workers to manage 3D print requests and class registrations
- Authored machine usage information and tutorials for public knowledge base: wiki.starforgefoundry.com
- Led renovation of electronics lab, rapid prototyping lab, and CNC machine upgrades

Hoverwheel | C++, Arduino, Fusion 360, STM32, ESP32

September 2023 – March 2024

- Designed and developed an open-source alternative to the Onewheel electric vehicle
- Built out of a used hoverboard for under \$400 (one-third of the price of an Onewheel PintX)
- Wrote custom control code in C++ on the Arduino platform
- Designed custom PCBs in EasyEDA and manufactured on a Carvera CNC router
- github.com/bwees/hoverwheel

EDUCATION

Texas A&M University

August 2023 – Present

B.S. Computer Science

College Station, TX