

# Ashwin Talwalkar

[atalwalkar719@gmail.com](mailto:atalwalkar719@gmail.com) | [linkedin.com/in/ashwin-talwalkar](https://linkedin.com/in/ashwin-talwalkar) | [github.com/Ashwin-T](https://github.com/Ashwin-T) | [ashwintalwalkar.com/](https://ashwintalwalkar.com/)

## EDUCATION

### University of Wisconsin-Madison

Madison, WI

*Bachelor of Science in Computer Science*

*September 2022 – December 2025*

Dean's List 1st and 2nd Years

### Relevant Coursework

Mathematics: Linear Algebra, Calculus I and II, Discrete Mathematics

Computer and Data Sciences: Data Structures (Java), Programming I, II, and III (Java), Data Science I (Python), Building User Interfaces (JavaScript), Machine Organization (C), Algorithms

Computer Engineering: Computer Engineering I

## PROFESSIONAL EXPERIENCE

### Software Engineer Intern

Palo Alto, CA

*Plume Design Inc*

*June 2023 – September 2023*

- Established a data collection pipeline to build a Hidden Markov Model within a Plume Labs team
- Constructed Python programs for Raspberry Pis utilizing multithreading to enhance data acquisition, encompassing MQTT message handling and Bluetooth Low Energy data processing.
- Employed AWS and Apache Flink to perform real-time analysis, processing, and transformation of training and ground truth data.
- Produced data visualization platforms to fulfill debugging and visualization requirements.

## EXTRACURRICULARS

### Software Engineer

Madison, WI

*Data Science For Sustainable Development*

*September 2022 - Present*

- Contributed to software projects aligned with Sustainable Development Goals (SDGs) in collaboration with global non-profit organizations.
- Developed a React web-based statistical calculator for RENEW Wisconsin, supporting the promotion of EV bus adoption. Drove program state structure and integrated Firebase for backend storage and authentication
- Assembled frontend in Hugo for Nagoya USARD, a dataset visualization platform for the QuaRCS-lab Network. Also embedded Python for running data science processes on the data presented on the frontend.

## PROJECTS

### Hiro | *React Native, Typescript, Express, Firebase, AWS, Arduino C*

June 2023 – Present

- Developed Hiro, a full stack real-time smart home management app, using React Native and Expo. Successfully launching on the Apple iOS App Store.
- Engineered a backend API with TypeScript, Express, and Firebase for efficient data collection and real-time updates.
- Designed and implemented autonomous software for Arduino and Raspberry Pi, powering smart picture frames, lights, and mirrors. Established seamless device-backend communication via AWS IoT Core and MQTT.
- Integrated a DialogFlow-powered AI chat/voice bot into the frontend, enhancing user interaction.

### Spartan Assistant | *React, Firebase, Mapbox*

December 2021 – August 2022

- Led the development of Spartan Assistant, a React-based web app enhancing onboarding for incoming freshmen at Mountain View High School. Leveraged Firebase for persistent data storage.
- Utilized feedback from school staff, students, and mentors to gather insights. Implemented features like an interactive map, FAQs, integration of 150+ geoJSON locations, room routing, and class schedule tools.
- Successfully launched and maintained the app, attracting a peak of 774 distinct daily active users.

## TECHNICAL SKILLS

**Languages:** Java, Python, JavaScript, TypeScript, JavaScript, HTML/CSS, C

**Frameworks:** React/React Native, Node.js, Flask, Apache Maven

**Developer Tools:** Git/Github, Amazon Web Services, Google Cloud Platform, VS Code, Redis, Apache Avro, Apache Flink, DialogFlow, Rest API