

# Brandon Wong

[portfolio-brandonw504.vercel.app](https://portfolio-brandonw504.vercel.app) | [LinkedIn](#) | [Github](#) | [brandonw504@outlook.com](mailto:brandonw504@outlook.com) | 408-229-3774

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## EDUCATION

### University of California, Davis

Davis, CA | Expected Graduation June 2025

Computer Science, B.S. and Statistics, B.S. (Machine Learning Track)

Technology Management Minor | GPA: 3.70

**Coursework:** Data Structures and Algorithms, Operating Systems, Computer Networks, Computer Vision, Deep Learning

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## SKILLS

**General:** Databases (PostgreSQL, MongoDB), Unit/Integration Testing, Authentication, Docker, Multithreading, Git, Linux

**Languages:** C++, C, Python, JavaScript, TypeScript, Java, Swift, HTML, CSS, SQL, R

**Frameworks:** SwiftUI, Next.js, React.js, Node.js, React Native, Apollo GraphQL, Jest, Auth.js

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## EXPERIENCE

### Apple | Software Engineering Intern

Cupertino, CA | June 2023 - Sept 2023

- Developed the Music Recognition module in **macOS Control Center** for the Shazam team using SwiftUI
- Independently started a **digital signal processing research** project and presented a prototype to Shazam's director
- Improved location filtering in Shazam's Events app, impacting over 100 million monthly users
- Demonstrated initiative by pitching a **sleep apnea detection prototype** to 5 members of the Health team leadership

### HackDavis | Technical Director

Davis, CA | Oct 2023 - Present

- Built [2024.hackdavis.io](https://2024.hackdavis.io) and [judging.hackdavis.io](https://judging.hackdavis.io) for California's largest student-run hackathon (1200+ attendees)
- Taught SwiftUI, Next.js, and full stack web and mobile development in **technical workshops**
- Engineered fair **matching and scoring algorithms**, processing 1000+ team scores displayed on a custom dashboard
- Architected an authenticated REST API with **MongoDB** models to manage 50+ judges and 150+ teams
- Developed 10+ responsive UI components such as a custom swiping image carousel and an interactive prize list

### Include at Davis | Technical Lead

Davis, CA | Sept 2023 - Present

- **Leading** a team of 20 engineers to develop an E-Store and Content Management System for professional clients
  - Taught **technical workshops** on GraphQL, databases, and Next.js, and performed meticulous code reviews
  - Developed a database migration system for MongoDB and wrote **unit tests**, improving developer experience
  - Engineered a GraphQL API with Prisma and **PostgreSQL** to manage complex relations between products, orders, etc.
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## PROJECTS

### Shazam Social ([Github](#))

SwiftUI, Realm, and MongoDB

- Developed an iOS social media app with **MVVM architecture** for users to share Shazamed songs
- Implemented **user authentication**, a custom map, and a versatile cached image component

### Field Event Tracker ([Github](#))

SwiftUI, CoreData

- Developed an iOS app to track and calculate results for field events at track meets, decreasing scoring time by 10x
- Used at 5+ local track meets, greatly improving athlete and meet director experience

### Song Vocal Extraction ([Github](#))

PyTorch, Scikit-Learn, and Librosa

- Trained a deep convolutional **U-Net** to isolate song vocals using spectrograms, producing a research report
- Currently implementing a **transformer** based variant, and deploying the model to a website using **Flask**