

# Patrick Nguyen

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## EDUCATION

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### University of California Davis

Davis, CA

*Bachelor of Science in Computer Science*

*Sept 2021 – Dec 2025*

- Relevant Coursework: Data Structures and Algorithms, Database Management Systems, Algorithm Design

## EXPERIENCE

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### Innovation and Research Lab at Davis | Software Engineer

*Oct 2024 – Present*

- Enhanced backend of the ASUCD AggieReuse website, increasing data processing speed by **40%** using **FastAPI** and **PostgreSQL**
- Mentored **50+** students during Hack Nights, guiding them in building advanced personal projects and maintaining a curated databank of project ideas
- Collaborated with the research side of the lab to integrate software solutions supporting data collection efforts

### AggieWorks | Software Engineer

*Sept 2024 – Present*

- Shipped deployable products serving over **38,000** UC Davis students, ensuring scalable and reliable solutions
- Achieved **50%** reduction in data processing time by containerizing a web scraper with **Docker**
- Conducted code reviews for pull requests, upholding best practices, and maintained GitHub CI/CD pipelines

### Icarus Development | Software Engineer Intern

*June 2024 – Sept 2024*

- Reduced manual transcription by **6 hours** weekly, automating lecture transcription via Canvas integration
- Configured secure **AWS S3 buckets** for efficient video transcription storage and retrieval
- Implemented high-performance **RESTful** API endpoints specifically tailored for handling video transcription tasks

### Google Developer Student Club | Software Engineer

*Oct 2023 – June 2024*

- Collaborated with a group of 5 students to develop MERN-based wellness tracker with real-time health
- Configured and secured a **MongoDB** cluster to ensure efficient data storage, seamlessly connecting frontend user input to the backend database for real-time updates

## PROJECTS

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### AggieMenus | *Next.js, Docker, Python, PostgreSQL*

*Sept 2024 – Present*

- Developed AggieMenus, a web app centralizing UC Davis dining commons menus to simplify browsing and switching between dining hall locations, dates, and meal times
- Developed a food filter and favorites feature, enhancing UX by organizing menu items and saved preferences
- Built mobile responsiveness by integrating Supabase Edge Functions with Capacitor for cross-platform accessibility

### Statify | *MongoDB, Express, React, Node.JS, Tailwind*

*Aug 2024 – Oct 2024*

- Developed a web app using the Spotify API to display top artists, songs, genres, and create personalized playlists for users
- Designed custom playlist cover images using OpenAI to generate color gradients that reflect the playlist's mood
- Built a community feature allowing users to post playlists to a shared feed, enabling discovery and interaction with others' playlists, managed with MongoDB for seamless data storage and retrieval

## TECHNICAL SKILLS

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

**Frameworks:** MongoDB, Express, React, Node.js, Firebase, Tailwind CSS, FastAPI, AWS, Django, Flask

**Engineer Tools:** Git, VS Code, PyCharm, Anaconda, Jupyter Notebook, Docker