

Aryamaan Dash

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EDUCATION

University of California-Irvine

Sep 2025 - March 2028

B.S. Computer Science and Engineering, Mathematics Minor, GPA: 3.6

Irvine, CA

- **Coursework:** Object-Oriented Programming, Digital Logic Laboratory, Probability & Statistics for CS, Data Structure Implementation & Analysis, Organization of Digital Computers, Discrete Math for CS
- **Clubs:** AI at UCI, IEEE at UCI, ACM at UCI, Engineering Student Council

EXPERIENCE

Hey, Blue!

Mar. 2024 – Dec. 2024

Software Engineer Intern

Remote

- Built and shipped 6 responsive React pages and reusable UI components, implementing user-facing workflows with React.js, HTML, and CSS across desktop and mobile layouts.
- Led a 5-developer frontend team, breaking product requirements into implementation tasks, coordinating feature ownership, and tracking deliverables through development and release.
- Implemented 4 user-facing features and resolved multiple frontend issues, collaborating with developers to integrate changes and maintain consistent behavior across the application.

PROJECTS

Study Tracker <https://track-my-studying.vercel.app/>

- Built and deployed a full-stack study tracking application using Next.js, TypeScript, Auth.js, Prisma, and PostgreSQL, implementing authenticated per-user session creation, deletion, validation, and persistent storage.
- Optimized dashboard data retrieval with 50-session cursor pagination and user-scoped caching configured with 5-minute stale, 15-minute revalidation, and 60-minute expiration intervals.
- Implemented PostgreSQL aggregation for 4 analytics time-frames and calendar visualizations, then conducted usability testing with 10 peer users and improved the interface from their feedback.

Programmable Multi-Effects Guitar Pedal <https://github.com/AryamaanDash/MultiEffectPedal>

- Built a Daisy Seed-based programmable guitar pedal with selectable bypass, distortion, reverb, delay, and flanger effects.
- Programmed real-time embedded C++ DSP firmware using DaisySP, audio callbacks, delay-line processing, wet/dry mixing, and debounced mode switching.
- Tested the pedal with 15 users, receiving positive ratings for its sound quality, effects, and uniqueness.

Reusable Embedded C Library https://github.com/AryamaanDash/embedded_c_library

- Developed a reusable embedded C library with 5 core modules GPIO, UART, ring buffer, FSM, and button debouncing using defensive input validation and static/caller-provided memory for embedded environments.
- Designed a platform abstraction layer separating hardware-independent GPIO/UART APIs from STM32G071 HAL implementations, translating portable driver types and status codes to platform-specific HAL operations.
- Implemented an O(1) circular byte buffer, configurable time-based button debouncing with press/release events, and a table-driven state machine that validates states, events, and duplicate transitions before execution.
- Tested the model with 15 users, obtaining positive ratings, and acknowledgment of creativity.

SKILLS

Languages : C++, Python, C, TypeScript, SQL

Frameworks : React, Next.js, PyTorch, TensorFlow, scikit-learn

Technologies : PostgreSQL, Prisma, Git, Docker, Linux, CI/CD