

Jamal Bhola

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EDUCATION

San Diego State University

Bachelor of Science in Computer Engineering

TECHNICAL SKILLS

Languages: Typescript, Javascript, Python, C/C++, Java

Developer Tools: Next.js, CI/CD, Arduino, Raspberry Pi, LTSpice, KiCAD, Cadence Virtuoso, AWS, Git, Docker, VS Code, PyCharm, Figma, Linux, Jira, Microsoft Office, Agile

Soft Skills: Cross Functional Team Collaboration, Strong Verbal and Written Communication Skills, Detail Oriented, Self Starter, Analytical and Problem Solving, Strong Organizational Skills, Project Management, Risk Management

PROJECTS

Discord AI Voice Cloning Bot

August 2025 – Present

- Developed a Discord bot capable of streaming, recording, and cloning voices in real-time for a group of 10 testers
- Integrated ffmpeg for high-quality audio streaming and discord.ext.recv for voice recording, resolving challenges in synchronizing Discord's data streams
- Evaluated 4 different voice cloning libraries and implemented Chatterbox.ai's zero-shot model, enabling instant cloning and providing 15 preset voices of celebrities and video game characters
- Optimized performance by leveraging GPU acceleration for AI inference, ensuring smooth real-time audio generation and playback

FPGA Rhythm Game

August 2024 – December 2025

- Programmed an Artix-7 FPGA, volatile and non-volatile memory, soft IP core CPU, and a VGA video display
- Programmed a rhythm game in Verilog with a video and audio output and created a memory map for the data
- Created a comprehensive report and block diagram demonstrating technical specification and top level design

SDSU Thrift Website | <https://github.com/leanneallen/sdsuthrift>

January 2024 – June 2024

- In a team of four, we created an e-commerce website that facilitates sales between SDSU students
- Spearheaded top level design, selected frameworks and libraries, and implemented 40% of webpages and implementing the backend, reducing page load time by 50%
- Used Vite, React, and Material UI for the front end, Django and a Postgres backend, achieving a scalable architecture handling up to 1000 user accounts with minimal hardware resources

Music Box Cyberphysical System | C++, Arduino, SD card

January 2024 – June 2024

- Designed a cyberphysical system, creating PCB schematics and implementing proof of concept on a breadboard
- Implemented a feedback loop based on a finite state machine model where volume is proportional to ambient noise
- Created meticulous documentation throughout the process using LaTeX and organized processes with GitHub issues

EXPERIENCE

Full Stack Developer

December 2024 – Present

- Attended meetings with a client and tracked feature requests and bugs, prioritizing client satisfaction
- Facilitated transfer to monetized structure, refactoring code base for security
- Fixed 50+ high priority bugs using a testing and integration pipeline

SDSU IT Services Help Desk Student Analyst

January 2024 – December 2024

- Provided in-person and remote technical support for students, faculty, and staff and handled ServiceNow tickets
- Assisted with network troubleshooting, account management, software issues, and two-factor authentication set up

SDSU Mechatronics – Electrical Engineering

August 2022 – December 2023

- Collaborated within a 50+ member cross functional team, synchronizing efforts among electrical, mechanical, and software engineering sub-teams
- Spearheaded hardware integration initiatives, taking charge of integrating sub headlights into the system
- Optimized the optical design of headlights to achieve superior illumination, enhancing overall performance