SHREYAS TELKAR

[redacted] | GITHUB

EDUCATION

University of California Santa Cruz, Sept 2019 - Dec 2023

Computer Engineering B.S. concentration in Systems Programming

COURSEWORK

- **Disciplinary:** C Programming, Data Structures and Algorithms , Compiler Design, Logic Design (Verilog), Introduction to Computer Networks, Computer Architecture
- **Lab-work**: Embedded Systems Design, Introduction to Electronic Circuits, Software Engineering Design 1 and 2
- **ITA Computer Networking Program** (High School): Cybersecurity and Computer Building Competitions, Presentation to FBI members on security for software companies.

SKILLS

- Languages: Python, C , C++, Verilog, RISCV, MIPS, HTML, CSS, MATLAB, Haskell
- Technologies: Git, Network Programming, Linux, VIM, Bash, Regex, Excel, Breadboard, OOP
- Soft Skills: Communication, Teamwork, Time Management, Critical Thinking

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PROJECTS

Smart Bell (Senior Software Design Project) **July 2023 - Dec 2023**

Dart, Python, Flask Server, Bash, Agile, Scrum

- Worked with a 5 person team project that developed an app and hardware for a hands-free door bell system
- Implemented live video monitoring on app
- Hand motion triggers doorbell and sends a live notification to user
- Targeted product towards elderly and disabled people who cannot directly physically press the doorbell.
- User Report and Response and Provides competition to market leaders like RING with cost-effective system.

Geometry Dash Type Platform Game **Jan 2023**

Verilog, FlipFlops, Bit Logic, System Design, State Machines

- Developed a playable platform game on an FPGA BASYS3 board that features a coin-collecting and pitfall-avoiding aspect with charged jumping mechanics.
- Designed with State machines, Sequential Logic, Counters, and Flip-Flops and displayed on the monitor with VGA.
- Implemented a large-scale system with smaller logic components.

Morse Code Decoder **June 2023**

Embedded Systems, C, Python, Circuits, Raspberry Pi, Device Data Collection, ESP

- Used the ESP32C3 API to program a photosensor to read in a morse code message sent in from a LED
- Optimized the led flash rate so that the photosensor can read a long message within 3 msec.
- Programmed the ESP in C and utilized freeRTOS for real time capture.
- Application for SOS or emergency signals that can be read from a farther distance.

Multithreaded HTTP Server **Dec 2022**

C, Systems Programming, Regex

- Programmed an HTTP Server that can handle GET and PUT requests to a socket (similar to a file descriptor)
- Parsed the request with Regex and formatted response is written to the socket.
- Utilized multiple modules for full system to work.
- Emulates an HTTP Server but is hardcoded for the methods.

INTERESTS/AWARDS

Full Stack Software Development, Embedded Systems / CyberPatriot National Cybersecurity Competition Silver Tier