

PRABHMEET BRAR

Los Angeles, CA

☎ +1(559)940-9087 ✉ prabhmeetb@gmail.com

OBJECTIVE

Computer Engineer major looking to build experience and apply skills. Proficient in embedded systems and programming. Driven and goal oriented student that enjoys a team's ability to create unique and optimized solutions. Expected to graduate in May 2023.

EDUCATION

California State University of Los Angeles (CSULA)

Aug 2020 – May 2023 (Expected)

Bachelor of Science in Electrical Engineering (Computer Engineering)

Los Angeles, CA

COURSEWORK

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|---|-------------------------|---|--------------------------|
| • Embedded Systems, Architectures, and Programming | • Machine Learning | • Biomedical Devices, Sensors and Data Acquisition | • Analog Communications |
| • Computer Organization | • Electric Machines | | • Intro Programming I,II |
| | • Signals and Systems | • Control Systems | • Differential Equations |
| | • Circuit Analysis I,II | | |

TECHNICAL SKILLS

Languages: C, C++, LabVIEW, MATLAB, Verilog, VHDL

Developer Tools: Visual Studio, Keil uVision, AWS, PSoC Creator

Technologies/Frameworks: Windows, macOS, MS Office, Oscilloscope, DMM, Function Generator, Soldering

PROJECTS

Grayson the Flying Robot | Arduino, Sensors, Servo Motors

August 2022 - May 2023

- Currently designing and building a robot capable of swinging from a trapeze and autonomously performing a flip
- Led development of electronic systems of robot, using a microcontroller to control hip servo motor and solenoids using onboard sensors. Developed debug system enable consistent and reproducible performance of the robot
- Outlined design requirements, specifications, bill of materials, and reports to document project development processes

Adaptive Suspension Control System | Arduino, Servo Motors

June 2022 - December 2022

- Integrated an adaptive suspension control system into an older vehicle, designed to provide improved stability and control dependent on driving conditions
- Built custom mounts for servo motors connected to coilovers, controlled by an Arduino to independently adjust four corner dampening based on preference or preset

Dual BLDC Driven Electric Skateboard

Jan 2020 - July 2020

- Powered a long-board using dual 6374 DC brushless motors. Used 18650 Li-ion cells to create battery
- Programmed ESC to control board using handheld remote and toggle speed profiles, used anti-spark switch to toggle power state, added BMS to the battery pack for safe charging, implemented gear reduction for usable speeds, and created custom enclosure of thermoplastic to protect hardware

Smart Fan Project | Embedded C, FreeRTOS, Sensors, PSoC Creator

Nov 2021 - Dec 2021

- Developed a program which collects temperature and distance information from two sensors. Two Cypress PSoC boards are used to communicate gathered data and control speed of the fan
- Applied components of real-time operating systems to transfer information by using queue and message buffers between the PSoC boards through a series of tasks and UART to constantly output results of input data and output commands

Ford Thunderbird Tail Lights Project | Embedded C, PLDs

April 2020 - May 2020

- Implemented state machine design project resembling a 1965 Thunderbird's sequential tail lights using programmable micro-controllers and integrated circuits such as logic gates, timers
- Created a functional scale model to accept and display inputs of brake, turn signals, and hazard lights