YOUNG SUNG LYUN

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Education

University of California, Los Angeles (UCLA)

B.S. in Electrical Engineering GPA: **3.93** / 4.00 June 2020 – June 2022

• Eta Kappa Nu (HKN), Dean's Honor List – Fall 2020, Winter 2021, Spring 2021

Skills

C/C++, Python, Linux

Altium Designer

React, JavaScript, Firebase

MATLAB, Simulink, LTspice

Projects

Bruin Calendar May 2021 – July 2021

React, JavaScript, Firebase, HTML, CSS

• **Project Goal:** create a social media application for students to interact on their personal events
• Implemented Calendar Planner to easily choose specific date to check, add, and modify events
• Implemented Sidebar for users to move to friend list, profile, and account settings
• Implemented firebase functions to enable for users to privately create accounts, search, and add friends

CPU Simulator October 2021 – December 2021

C++, RISC-V ISA, Pipeline Processor Design

• **Project Goal:** realize a processor in software to learn pros and cons of different cache models and strategies
• Designed a 5-staged pipeline 32-bit CPU in C++ with capability of operating 10 different RISC-V ISA instructions
• Adapted Least-Recently-Used replacement policy to simulate position updating overhead in processors
• Implemented memory controller with L1 cache in 3 different models to compare performance

Automated Test Equipment June 2021 – Present

C, C++, Altium Designer, ADC, DAC, DAQ, Relay, MUX, PIC, CAN

• **Project Goal:** redesign a test equipment and resolve test errors with Brake Control Unit, analyzing functions
• Implemented communication code in C++ to test Brake Control Unit and transfer data to tester via CAN
• Discovered errors in test script and corrected by modifying Scope, ADC, and DAQ settings and test limits

Bruin Supermileage Electric Vehicle October 2020 – Present

C++, Altium Designer, PCB, LTspice, Arduino, Teensy

• **Project Goal:** design different electric motor controllers for stable and efficient driving
• Implemented Brushless DC motor controller with automatic PID ramping functions for smooth acceleration
• Implemented a hardware PID controller to control the speed and maintain constant speed in load variations

Work Experiences

Crane Aerospace and Electronics | Hardware Engineering Intern June 2021 – Present

• Participated in 5 projects with Automated Test Equipment department and 20+ document releasing process

United States Army Reserve | Team Leader November 2019 – Present

• Led technical decontamination team during the 4+ missions to protect against nuclear and chemical attacks
• Maximized mission capability by calibrating 5 different equipment for the unit before every operation