Ken Baierl

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Summary

Earned a Bachelor's degree of Science in Electrical Engineering and a minor in Environmental Science and Policy with specialized experience in computer hardware design. Seeking an internship position related to hardware design where I can leverage my knowledge in designing transistor chips in Cadence or designing electronics relating to optical engineering.

Education

Chapman University, Orange, CA — December 2023

Bachelor of Science, Major in Electrical Engineering

Cumulative GPA: 3.1

Relevant Courses: Calculus 1, 2, and 3, Physics 1, 2, and 3, Electronic Circuits I and II, Digital Logic Design I and II, Computer Architecture I, Digital Signals and Filters, Engineering Mathematics, Discrete Mathematics, Integrated Circuit Design I, Systems Programming, Linear Algebra and Differential Equations, Microelectronics, Control Systems, Electromagnetics, 3D Printing and Modeling, and PCB Printing.

Experience - https://kenbaierl.github.io/kenbaierlportfolio/

Chapman University Lab Assignments — Orange, California

Chapman University — Aug 2019 - Present

- Collaborated with classmates to create multiple RTL design projects with Verilog code to work on an Arduino.
- Used breadboards to create multiple circuits while also finding a waveform using an Oscilloscope.
- Created a single cycle processor and arithmetic logic unit using Logisim.
- Created an LED color organ to filter the high, mid, and low frequency bands to different colors when given an input sound.
- Worked on improving Artificial Intelligence hardware with fellow classmates by improving the design of high-power computer systems.
    - https://blogs.chapman.edu/gci/2021/04/26/artificial-intelligence-and-improved-hardware-architecture/
- Designed in cadence a fully static true single phase clocked dual edge triggered flip flop in Cadence that passed both DRC and LVS checks.
- Created multiple PCB cars using schematics and printed the PCBs through Eagle Schematics designed. Soldered the parts together while also 3D printing parts to be used for the car.
- Created a control systems project for a wind turbine using a PID controller with a classmate to find the error values to account for disturbances and measurement errors.

Activities Experience

Chapman University Football Team — 2019-Present

- Starting place-kicker as an incoming freshman.
- First Team All-SCIAC awarded for 2021-2022 and 2022-2023 season.
- First Team All-Region awarded for 2022-2023 season.
- Special teams player of the year awarded for 2021-2022 season as well as multiple records broken.
- Balanced time between life as a full-time engineering student and athlete while averaging around 24 hours per week for practice, conditioning, training, and games.

Skills

Programming Languages: Verilog, MATLAB, Wolfram Mathematica, Java, Python, C

Technologies: Cadence, Spice, Logisim, Arduino, Oscilloscope, Soldering Iron, Eagle Schematics, Fusion 360, Prusa MK3S+

References available at request