

James W. Skelly

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Education

M.S., Electrical Engineering | University of Nevada, Las Vegas | Expected Graduation: Dec. 2021

B.S., Electrical Engineering | University of Nevada, Las Vegas | May 2020 | **GPA: 3.968**

Jobs & Experience

RESEARCH ASSISTANT, DR. R. JACOB BAKER | MARCH '18 – PRESENT

- Design test boards (PCBs), solder through-hole and surface mount components, lay out ICs using the C5 and TowerJazz processes in Cadence, and bond ICs to their packages for testing using the K&S Ltd. Dicing Systems Wire Bonder (Model 4526). Research and test ASICs (Application Specific Integrated Circuits). Extensive experience using **LTSPICE** and **Cadence**.

INTELLECTUAL PROPERTY TECHNICAL CONSULTANT | APRIL '19 – PRESENT

- Provide expert consulting services including reviewing schematics and other case materials. Clients include **Covington & Burling LLP (Palo Alto, CA and Washington, DC)** and **DLA Piper (East Palo Alto, CA)**.

STUDENT EE INTERN | POLOLU ROBOTICS AND ELECTRONICS | AUGUST '21 – OCTOBER '21

- Trail electrical and mechanical engineers, learn Altium software, review schematics and board designs. Learn basic design principles and practices from experienced designers. Assist in PCB design/review.

MANUFACTURING TECHNICIAN | VORPAL RESEARCH SYSTEMS | MAY '19 – AUGUST '20

- Perform hand-soldering, de-paneling, setup, and solder-pasting of circuit board panels, and ESD-safe packaging of completed products.

Projects

- **Wireless Data Transmission System:** Designed a system to amplify and wirelessly transmit low-voltage sensor readings via Bluetooth to a smartphone app. PIC18LF26K22 MCU programmed in C using MPLAB.
- **Manually Operable Scoreboard:** Designed a 9"x15" scoreboard for various sports using an ATmega328P MCU programmed in C. Scores increment/decrement using push buttons.
- **Motor-Driven Laser Alignment Station:** Designed a laser lens alignment station using programmable stepper motors and ball-screw linear actuators. GUI programmed using C#.
- **Darkness Sensor:** Designed a tripod-mounted PCB using a photoresistor and on-chip ADC to form a darkness sensor. ATMEGA328P microcontroller, programmed in C using Atmel Studio.
- **CMOS Boost Switching Power Supply:** Designed and laid out a Boost SPS to output constant 5V for varying temperature and power supply voltage in Cadence's C5 (500nm) process.

Additional Skills

- Altium, SolidWorks, DipTrace, C, C++, C#, MATLAB, MPLAB, Microchip/Atmel/Visual Studio