SUWEN LI

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I am an electrical engineering new graduate focused on board level hardware with the ability to drive projects forward through effective cross-functional collaboration. Drawing on my diverse background, I leverage my experiences to deliver results that bring value to both the project and the business.

SKILLS

CAD and Simulation: Cadence OrCAD and Allegro, Altium Designer, Sigrity DC, ADS, PSIM, SolidWorks
Lab and Debug: Oscilloscopes, Power Supplies, Electronic Loads, Function Generators, VNA, TDR, Soldering
Other: Microsoft Office, Visio, MATLAB, Python, C#, C, C++, JavaScript

EXPERIENCE

Arista Networks | *Hardware Engineering Intern* — *Santa Clara, California | Jan. 2018 – Apr. 2018*

- Sole board design engineer of a 24-layer test board with **high-speed** PAM4 SerDes strip-line TL signals
- Took PCB through **all stages of design** (tech specification, stack-up, schematic, placement, layout, DFM)
- Complete **schematic capture** of circuit board; featuring re-timers, **high-power switching voltage supplies**, with interfacing capabilities through I2C and SMBUS
- Optimized routing for **signal integrity** (ex. stub reduction, trace arcing, back-drilling, spacing, etc.)
- Defined board **stack-up** using low-loss PCB dielectrics with the help of 4-port network simulations in **ADS**
- Collected **impedance and insertion loss profiles** of various boards using **TDR** and **VNA** scopes, respectively
- Scripted high-speed connector pin mappings and length-matching calculations using **Python**

IGNIS Innovation Inc. | *Hardware Engineering Intern* — *Waterloo, Ontario | May 2017 – Aug. 2017*

- Complete **schematic capture and layout** of a four-layer step-down power distribution board in Altium
- Designed and tuned a PID temperature regulator using a Peltier, programmed all microcontroller code
- **Improved overshoot by 90%** and steady state error by 33% through simulations in **Simulink** and **MATLAB**
- Designed with **DFM** in mind, communicated with and incorporated feedback from design houses

Bain & Company | *Associate Consultant Intern* — *New York, New York | Sept. 2018 – Dec. 2018*

- Designed and executed a multivariate test involving 50+ employees, resulting in a **25-30% client sales lift**
- Created an **automated dashboard** to monitor sales that was presented to client VP every morning
- Extensively analyzed historical client data and organized insights and recommendations into PowerPoint

AMD – ATI Technologies | *Software Developer – GPU Team* — *Toronto, Ontario | Sept. 2016 – Dec. 2016*

- Implemented feature to notify and send display topology details to OS upon monitor connectivity
- Developed an **automated testing infrastructure** in Python; reducing QA reported issues by **~30%**
- Extensively debugged Kernel bugs relating to display connectivity on various Windows systems in C/C++
- Presented comparative analysis to upper management on company's revision control system options

PROJECTS

Lynx | *Fourth Year Capstone Design Project* — *May 2018 – Apr. 2019*

- Created a wearable device that prevents the loss of items by using a collection of small Bluetooth devices that notify users via haptic, visual and audio feedback when valuables are out of range
- Responsible for **board bring-up, debug and device characterization** (wireless charging quality and speed)

EDUCATION

University of Waterloo | *B.A.Sc. Electrical Engineering* — *Graduation May 2019*

Dean's Honors List | President's Scholarship of Distinction | **Cumulative GPA: 3.8**