Tyler Bisk

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY **Expected December 2023**
Master of Engineering in Electrical and Computer Engineering
Admitted; Expected Enrollment January 2023

Cornell University, College of Engineering, Ithaca, NY **Expected December 2022**
GPA: 3.91
Bachelor of Science in Computer Science, Minor in Electrical and Computer Engineering
Selected Coursework: Embedded Systems, Design with Microcontrollers, Digital Logic, Computer Vision, Algorithms, Intelligent Robots, Operating Systems, Programming

ENGINEERING EXPERIENCE

Tesla, Inc., Palo Alto, CA, *Software Integration Intern* **May 2022 – Present**
- Developed vehicle control code in C that is currently being executed on millions of vehicles worldwide
- Streamlined battery pack testing and validation by leveraging python scripts on the factory floor
- Building software to increase the reliability and safety of Model S and X battery packs

Cornell Racing (Formula SAE Electric), Ithaca, NY, *Electrical Team Lead* **May 2021 – June 2022**
- Led a team of 12 students in the organization and integration of the low voltage systems for an electric racecar
- Oversaw and assisted in the design of six custom PCBs, including an ECU, a power distribution board, and a shutdown board
- Coded and debugged all firmware for controlling the throttle, brakes, indicators, dashboard, and on/off conditions

Advanced Micro Devices, Inc. (AMD), Remote, *Silicon Design Engineering Intern* **May 2021 – August 2021**
- Designed next generation x86 microprocessors alongside the Cores Physical Design group using digital logic
- Programmed in Verilog to eliminate clock skew and minimize hold time in the branch prediction unit
- Contributed to increasing clock speed on AMD Ryzen CPUs

SELECTED PROJECTS

Sharks and Minnows Videogame on a PIC32 **Spring 2022**
- Designed and built a multiplayer videogame which introduces the player as both the predator and the prey
- Features a complex FSM, multiple game modes, sound effects, and nostalgic hardware
- Selected to be published in Circuit Cellar Magazine in August 2022

Autonomous Arduino Maze-Solving Robot **Fall 2021**
- Synthesized a PID controller and a Depth First Search algorithm to solve an arbitrary 10’ x 10’ maze in under five minutes
- Equipped robot with an Arduino, a battery pack, in-hub continuous-rotation servos, ultrasonic sensors, and photoresistors
- Wirelessly streamed location in maze using radio frequency and 7-segment displays

TA EXPERIENCE

ECE 4760, Digital Systems Design Using Microcontrollers, Cornell University **Planned Fall 2022**
- *Course Material:* C programming, electronic design, and embedded control

ECE 2300, Digital Logic and Computer Organization, Cornell University **Fall 2021**
- *Course Material:* transistor network design, FPGAs, pipelining, and memory hierarchy

ECE 1210, The Computing Technology Inside Your Smartphone, Cornell University **Spring 2021**
- *Course Material:* FSMs, instruction sets, assembly, Boolean algebra, and digital logic

AWARDS

Tau Beta Pi National Engineering Honor Society, New York Delta Chapter **April 2022**
Dean’s List, Cornell University; College of Engineering **All Semesters**

SKILLS

Programming Languages: Python, C/C++, Java, OCaml, Swift
Hardware: PCB: Schematics, Layouts, Manufacture, Validation; Soldering, Breadboarding
Software: Altium, Xcode, Git, IDE: Arduino, Microchip, STM