ZOLTAN CSAKI

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EDUCATION

Cornell University, College of Engineering (GPA 3.75) — May 2022
Lansing High School (GPA 94.5) — June 2018

WORK EXPERIENCE

KIONIX APPLICATIONS ENGINEER [INTERN] — JUNE-AUGUST 2019

Created a slot car demo with a Kionix accelerometer by taking in data, processing it and running algorithms to display sensor applications such as terrain detection, g-force monitoring and speed measurement. Updated SQL database so that files could be found easily when searched and created a table with filters to organize files on the website. Updated and added many pages to the website using HTML.

INTRODUCTION TO PYTHON CS 1110 [CONSULTANT] — AUGUST 2019-NOW

Run sections by helping students with online labs. Help students during one on one consulting hours. Grade projects and exams with topics including object oriented programming and loop invariants.

LEADERSHIP AND ACTIVITIES

CORNELL CUP ROBOTICS [MEMBER] — SEPT 2018 - NOW

Lead programmer for an R2D2 replica autonomous navigation sub team. Implemented simulations to plan autonomous paths using A* search with path smoothing. Working with LIDAR, infrared sensors, ultrasonic indoor GPS and encoders to detect objects and map out a virtual environment.

Worked with an electrical and computer engineering team that is developing robotics kits for kids including simple to use custom made electronics and modular connections that can interface with Raspberry Pi's and controlled by a GUI. Worked with python, Pi's and sensors.

FTC ROBOTICS TEAM [PRESIDENT] — SEPT 2015 - JUNE 2018

Team lead Junior year, and head programmer senior year. Qualified for state competition 2017, 2018. Worked with Java programming, sensors, 3D modeling/printing, and mechanical design.

PROJECTS

CORNELL MAKE-A-THON, CUSTOM PAINT MIXING — FEBRUARY 2019

Designed a device that allows users to select any color from the RGB spectrum, and makes that exact shade of color by autonomously mixing paint.

PROJECT LEAD THE WAY, "DUSTIN" — SEPT 2017 - JUNE 2018

Developed a miniature autonomous dusting robot using Arduino. Pitched the idea to local technology company representatives. Worked with sensors, circuitry, Arduino software and design process.

CORNELL MAKE-A-THON, "INSTA-LERT", 2ND PLACE — FEBRUARY 2016

Designed a child security mechanism using Arduino with a team. Created a functional prototype in 24 hours and pitched the idea.

SKILLS

Python, Java, OCaml, C, SQL, Arduino, Raspberry Pi, Circuitry, Sensor integration (accelerometer, gyroscope, infrared, lidar), basic HTML

COURSES

Past Cornell Courses: Algorithms, Functional programming, Object Oriented Programming and Data Structures, Discrete Structures, Introduction to Computing, Embedded Systems, Digital Logic and Computer Organization, Differential Equations, Linear Algebra, Multivariable Calculus, Introductory Operations Research, General Chemistry, Physics II: Electromagnetism, Physics 1: Mechanics and Heat

HONORS

Dean's list every semester at Cornell, FTC Control Award for Innovative Autonomous Design 2018, RIT Computing Medal 2017