Heather Nelson

www.linkedin.com/in/hcnelson

3404 S. Union Ave
Chicago, IL 60616
(215) 239-1001
hnelson@hawk.iit.edu

EDUCATION

Illinois Institute of Technology, Chicago, IL — *Mechanical Engineering and Computer Science*

August 2015 - May 2019
GPA: 3.5

I am working towards a Bachelors of Science in Mechanical Engineering and a minor in Computer Science.

EXPERIENCE

IIT Architecture Lab, Chicago, IL — *Train, Repair, and Monitor*

August 2016 - Currently

My responsibilities within the architecture lab include repairing and maintaining the Shapeoko and Precix CNC machines, the Ultimaker and Stratasys 3D printers, and the woodworking and metalworking tools and machines, problem solving any software issues that may occur. I also lead trainings on using the CNCs and programming in G-Code.

Navistar, Chicago, IL — *Product Validation and Analysis*

June 2016 - August 2016

Built and developed hardware and software for a laser based lane detection system to test vehicle tire slip when braking in a curve. Integrated software for Gopro control with the CAN-bus on vehicles to set recording events, then utilized openCV and python to analyse the video footage recorded.

NASA-funded Research Fellow, Chicago, IL — *Lead Researcher*

February 2015 - August 2015

Built and developed software for sensor systems to measure atmospheric conditions in extreme environments. Taught college students how to develop and code measurement systems using Raspberry Pi and Arduino.

STEM Launch IIT, Chicago, IL — *Program Assistant*

August 2015 - June 2016

I handled curriculum development, ordering of materials, balancing monthly budget statements, maintenance and organization of storage, and communication between representatives at Chicago Public Schools, City Colleges of Chicago, and the US Navy. During events, I teach advanced STEM concepts to students.

UnCanned, Chicago, IL — *Software Engineer*

August 2013 - August 2015

Prototyped and developed automated music playing software for the company using shell scripts and daemon services.

SKILLS

Autodesk Inventor and CAD
Adobe Photoshop
Microsoft Office Suite
ANSYS, Pro-E, Solidworks
Cucumber Testing
Arduino, Raspberry Pi
OpenFOAM
Sensor based IOT systems

AWARDS

Pi Theta Kappa Honor Society
Dean's List
Leadership Academy Scholar
NASA Research Fellowship
Campus 1871
Maker Society President

PROGRAMMING

Python
C/C#/C++
MatLab
Ruby
Java, JavaScript

RESEARCH

Radiation density of seeds in near space environments.

I worked with a small team developing sensor equipment to monitor high energy particles, temperature, and pressure in extreme conditions. Data collected was used to understand genetic mutation in plant species exposed to radiation.

RELEVANT COURSES

Design of Machine Elements
3D Design with CAD
MatLab
Assembly Language
Data Structures and Algorithms
Numerical Methods
Systems Programming