CHIRAYU JAIN

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Education

Northeastern University Boston, MA
Bachelor of Science in Electrical Engineering May 2021

- GPA - 3.657
- Coursework - Electronics, Enabling Engineering, Circuits and Signals, Embedded Design, Differential Equations, Fundamentals of Networks

Experience

Draper Laboratories Cambridge, MA
Electrical Engineering Co-op January 2019 - August 2019

- Reverse engineered and redesigned temperature control unit for the test of PIGA accelerometers
- Designed and ran control software for the recalibration of high precision tiltmeters using MATLAB and LabVIEW
- Developed a signal management and visualization tool using MATLAB
- Designed cables for communication between flight software and sensor control
- Programmed productivity tools that enabled all stakeholders to identify problems that required immediate action

First Year Engineering Learning Center Boston, MA
Mentor January 2018 - Present

- Host 1-on-1 lessons to teach students Solidworks, Arduino, Matlab, C++, soldering, and fabrication
- Manage all CAD model files for Cornerstone of Engineering students and help redesign for optimal manufacturing
- Run and troubleshoot 3D printers, laser cutters, and CNCs

Paintants Corporation New York, NY
3D Printing Engineer July 2016 - Present

- Researched, designed and built a 1m x 1m x .2m 3D printer to create art pieces using silicon based plastics
- Constructed a CMYK 3D printer head for manual printing in full color and gradients

Cooper Union Summer STEM New York, NY
Teaching Assistant July 2018 - August 2018

- Guided 16 ESL high school students through the engineering design process to build kinetic sculptures
- Created and taught lessons on Arduino, CAD, 3D printing, laser cutting, and technical presentations

Fat Cat Fab Lab New York, NY
Fabrication Intern February 2017 - August 2018

- Created modification for the Ultimaker 2+ printer which enabled it to print while being raised up a railing
- Trained lab members on printer's enhanced capabilities and how to sustain maintenance of the equipment

NASA's Space Apps Next Gen New York, NY
Lead Hackathon Organizer January 2015 - July 2017

- Partnered with sponsors, judges, and media groups to organize a hackathon for 150 high school students globally
- Managed hardware and electronics for public use at the event, as well as mentored students in Arduino and Java coding

hackBCA Hackensack, NJ
Executive Board Member September 2014 - June 2017

- Connected with over 40 major computer science companies for sponsorships, totalling over $40k in funding
- Organized and operated electronics, 3D printers, and laser cutter for over 500 students during the events

Projects

Self Correcting 3D Printer September 2016 - June 2017

- Researched and designed a printed circuit board for a rotary encoder chip to be mounted on a stepper motor
- Designed and programmed a flexible closed loop 3D printing system to allow detection and correction of motor failures

Nintendo Arcade Game Controller September 2017 - June 2018

- Developed an Arduino based arcade controller compatible with the Nintendo Wii and Gamecube, or wirelessly with a PC
- Designed the controller around ergonomics to enable people with carpal tunnel to play video games

Skills

Technical Skills - MATLAB, LabVIEW, AutoDesk Inventor, AutoCad, SolidWorks, Fusion 360, OrCAD, PSpice, C++, Arduino, Java, UNIX, HTML, CSS, G-Code, 3D Printing, Laser Cutting, CNC, CAM, Oscilloscope, Soldering
Languages - Hindi - Fluent, Mandarin - Conversational