

Thanh Nha Nguyen

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Education

Massachusetts Institute of Technology (MIT)

Class of 2019

Candidate for Bachelor of Science in Mechanical Engineering GPA: 4.7/5

Coursework: Mechatronics, Numerical Simulation, Analog Electronics, Power Electronics, Mechanics and Materials, Feedback Controls, Bioinspired Robotics, Medical Device Design

Experience

Cruise Automation - Technical Intern

Summer 2018

Developed a new benchmark to evaluate camera intrinsics calibration

- Created a camera intrinsic calibration to fix lens distortion using OpenCV
- Formulated a new metric to evaluate the calibration parameters.

MIT Precision Engineering Research Group - Undergraduate Researcher

February - May, 2018

Made a new type of bearing for a progressive cavity pump

- Developed a new kind of bearing to accommodate the eccentric motion of a progressive cavity pump.

MIT Gallant Research Group - Undergraduate Researcher

September 2017 - May 2018

Custom made a device for rotating disk electrode experiment

- Developed a hermetically sealed pressure vessel for rotating disk electrode experiment.

Intel's Sport Innovation Studio - Technical Intern

Summer 2017

Developed a wireless charging station at 1/60th of the budget

- PCB layout of the wireless charging circuit on Cadence
- Designed and built a wireless charging station for 24 devices.

MIT CSAIL - Undergraduate Researcher

February - August, 2016

Led the design and fabrication of a landing platform on an All Terrain Robot Vehicle (ATRV) for a drone

- Designed a landing platform with latching mechanism capable of accommodating for many different types of UAV.
- Implemented a control algorithm to autonomously land the drone with an accuracy of +/- 5 inches.

Pickle Research Center at the University of Texas - Research Intern

Summer 2014

Conducted independent research on the detection of drones with an array of ultra wide band radars

- Developed two separate algorithms to track the positions of a drone in 3D space

Leaderships and Awards

East Campus Residence Exploration - Design Lead and Foreman

2016, 2017, 2018

- Created a human-powered carousel called #YOLO (<http://tinyurl.com/z5rpnmf>).
- Created a human-sized gyroscope called Space Trainer (<https://youtu.be/dnuJcmvq31M>)
- Created a 60 ft long and 20 ft tall arch brige (<http://gregcookland.com/wonderland/2018/09/01/mit-fort/>)

MakeMIT 2018: Best Use of Machine Learning

2018

Prototyped a automatic paint mixer (<https://devpost.com/software/paint-with-all-the-colors-of-the-rainbow>)

ProjX Grant 2017: Best Project

2017

Developed a custom magnetic pickup and analog sound processor for a violin

Skills

Computer/Programming: Java, Python, MATLAB, SolidWorks, C++, ROS, Cadence

Machining: mills, lathes, waterjets, band saws, drill presses