Gerry Chen

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Education

Duke University, Durham NC **Expected May 2019**
Pratt School of Engineering

- Major: Mechanical Engineering (BSE)
- Minors: Electrical and Computer Engineering + Math
- 3.88/4.00 cumulative GPA (4.0 Fall 2017), Dean's List every semester

Skills

- Substantial CAD experience (Solidworks, Autodesk Fusion, Eagle, SPICE)
- Microcontrollers i.e. Arduino, Atmel, IoT, and PIC
- Experimental design and sensor data acquisition
- Strong command of Python and Matlab
- Proficiency in Java, MATHEMATICA, HTML/CSS, Javascript, Swift, LaTeX, "Arduino"
- Knowledge of C, C++, MIPS

Activities

Engineer **08/2015 to Present**
Duke Electric Vehicles

- Lead the conversion to a hydrogen fuel cell hybrid vehicle for 2018 - Guiness world record contender
- Design + Manufacture + Test the high power super-cap control board to increase vehicle efficiency by 22%
- Create an automated testing system resulting in fuel cell efficiency increase from 40% to 63%
- Design + Manufacture + Install the carbon fiber inserts to decrease weight and increase modularity
- First place battery-electric prototype team at the 2017 Shell Eco-Marathon achieving 9967 MPGe

Project Lead **01/2016 to Present**
Solar Benches

- Augment existing campus benches with solar powered night-time task lighting and laptop/phone chargers to raise enthusiasm for clean energy
- Lead technical research/design, fund acquisition, and communication with Duke administration
- Installed 2 test benches on campus so far after passing safety inspection on an off-site prototype bench

Work History

Robotics Motion Planning Intern **01/2017 to Present**
Intelligent Motion Labratory - Dr. Kris Hauser

- Submitted joint paper to IEEE International Conference on Robotics and Automation 2018 (Accepted 01/12/2018) - work funded by NSF Research Experiences for Undergraduates (REU) to implement a Precision Positioning Unit (PPU) on the Tele-Robotic Intelligent Nursing Assistant (TRINA)
- Coded algorithms (Python, C++) for max continuous range - min manipulatability arm configurations
- Conducted tests for displacements due to load forces on TRINA-mounted PPU to evaluate algorithms
- Fabricated polyurethane "finger" tip with integrated tactile sensor and 95.7% actuation success rate

Teaching Assistant **08/2016 to Present**
Duke University

- EGR201: Mechanics of Statics (grading and office hours) 08/2017 to 12/2017
- ECE230: Microelectronics (lab and grading) 05/2017 to 12/2017
- EGR103: Computational Methods in Engineering (lab, office hours, and grading) 08/2016 to 12/2016
- CS201: Data Structures and Algorithms (recitation, helper hours, and grading) 08/2016 to 12/2016

Tutor **05/2014 to Present**
Multiple Employers

- Duke Academic Resource Center - Multivariable Calc, Lin Algebra, and Differential Eq 08/2016 to Present
- America Reads America Counts at Duke - Durham Public Schools 08/2015 to 06/2016
- Kumon Math and Reading Center of Fox Chapel - Math and Reading 05/2014 to 08/2016