Georgia Burr Crowther

she/her/hers · georgiac.github.io · linkedin.com/in/georgia-crowther/

Education

Carnegie Mellon University – Robotics Institute Pittsburgh, PA
Masters of Science in Robotic Systems Development (MRSD) – GPA 4.00 May 2019

Cornell University – College of Engineering Ithaca, NY
B.S.E. in Mechanical Engineering – GPA 3.53, 2013 Kessler Fellow May 2014

Professional Experience

Robotics Hardware Engineer **February 2022 – April 2023**
Denizen, Inc
- Built, programmed, and managed industrial robot arm for large format advanced manufacturing (LFAM)
- Designed and printed 3D printed dwellings including fully-functional work and bathroom "pods"
- Wrote RAPID code generator to convert GCode files into machine-readable form

Robotics Hardware Engineer **May 2019 – Present**
ProtoInnovations, LLC
- Designed, built, and field-tested experimental rover wheels for NASA SBIR program in collaboration with NASA centers
- Developed innovative mechanisms and technologies for sensing wheel performance and actively adjusting wheel properties using shape memory materials
- Performed wheel testing and validation using custom hardware designed in-house for NASA centers

Mechanical Engineer **Summer & Winter 2013, May 2014 – February 2017**
Social Bicycles/JUMP Bikes
- Designed and implemented mechanical and electrical systems for large-scale production
- Coordinated manufacturers, assembly houses, component supply chains, and customers to deploy outdoor POS kiosks and other bike infrastructure in over a dozen cities
- Prototyped secure and robust mechatronic locking and charging mechanisms for electric-assist transit products with a focus on DFM and modularity
- Collaborated with operators and interacted with users to improve products and customer experience

Projects and Research

Tensegrital Wheel for Enhanced Surface Mobility – Intern/Researcher May 2018 – May 2019
Carnegie Mellon University, Advisor: Dimitrios Apostolopoulos
- Exploring unique wheel geometries that mimic the properties of variable pressure pneumatics through tensegrital design and minimal actuation for planetary exploration
- Researching analytical methods for devising and controlling actuated, stable tensegrity

Remote Control Car Prototype – Mechatronic Consultant February – May 2019
InMotion Systems
- Invented an add-on steering device for converting a conventional car to a remotely controlled vehicle
- Designed, constructed, and tested hardware on multiple car models

Multi-Modal Landmine Detection – Roboticist September 2017 – May 2018
Carnegie Mellon University, Advisors: Dimitrios Apostolopoulos, John Dolan
- Developed and tested low-cost, automated platform for detecting and classifying buried landmines
- Designed and built actuation hardware and power distribution electronics for multi-modal sensing system

Cornell Mars Rover Project Team – Team Lead, Systems Engineer September 2011 – June 2014
Cornell University, Advisor: Ephrahim Garcia
- Led interdisciplinary team of 40 students to compete in the University Rover Challenge
- Designed and manufactured robotic arm, claw, and chassis components
- Acted as the team system engineer, coordinating efforts from software, electrical, and mechanical sub-teams

Skills

Hardware Design Tools: Fusion360 · SolidWorks · Rhino/Grasshopper · ANSYS · EAGLE
Manufacturing: Rapid Prototyping · Manual/CNC Machining · MIG/ TIG Welding · Woodworking
Programming: Python · MATLAB · RAPID · C · C++ · HTML
Other: Fundraising · Leadership · Stage Production · Conversational Spanish