MIKE ORNSTEIN

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Current Address: SMC 6555, 5032 Forbes Avenue, Pittsburgh, PA 15289

Permanent Address: 34 Elm Street, Hopewell, NJ 08525

EDUCATION

Carnegie Mellon University — Pittsburgh, PA

Bachelor of Science in Mechanical Engineering — May 2013

Minors: Robotics, Industrial Design

Carnegie Institute of Technology Dean's List — Fall 2010

Major GPA: **4.00** *Overall GPA:* **3.81**

RELEVANT EXPERIENCE

Atkeson Laboratory: Robotics Institute — *Pittsburgh, PA*

Student Mechanical Designer — *June 2010 – present*

Inflatable Robot Arm and Grasper

- Invented novel, safe, pneumatically actuated grasper, arm and wrist (*patent pending*).
- Designed control hardware and software for assistive tasks; tooth brushing, shaving.
- Fabricated multi-chambered, jointed, inflatable structures for research evaluation.

SARCOS Hydraulic Humanoid Robot

- Manufactured upgraded components for ankle joint to integrate with new sensors.
- Redesigned failed components of hip joint using CAD, created via CNC manufacture.

PROJECTS

Formula SAE: *Leader, Body Design Group* — *Fall 2009 - present*

- Applied techniques for large-scale composite fabrication and CNC manufacture.
- Coordinated donation from Advanced Pattern Works valued at $20,000.

HyLo Robot: *Project Leader* — *Fall 2009 - present*

- Built mechanical systems for a quadruped robot capable of quickly traversing rugged terrain.
- Modularized design to expand capabilities: climbing ladders, crossing tight ropes, etc.

CMU Quadrotor Helicopter: *Project Leader* — *Fall 2010 - present*

- Lead inter-disciplinary team in manufacture of autonomous aerial robot for terrain mapping.
- Integrated power, sensory, and control modules into a low weight, airworthy package.

FIRST Robotics: *President* — *2005 - 2009*

- Created integrated mechanical systems that proved successful in competition.
- Learned to use machine and hand tools, created drawings for manufacture.

LEADERSHIP

Robotics Club: *Public Relations* — *Spring 2010 - present*

- Maintain and update club website with project status and news.
- Design posters, flyers, and signage to promote and improve club image.

President of FIRST Robotics Club: *Team 293* — *2008 - 2009*

SKILLS

Machine Tools: Advanced Mill, Lathe, Drill Press, Band Saw, Beginner CNC Mill, Beginner MIG Welder
Software: SolidWorks, PhotoView360 , Adobe Photoshop, MS Office Suite, Windows, Mac OS, Unix
Programming: C, C++, JAVA
Licensed Private Pilot: Certification earned at age 18