

THOMAS J. CARLONE

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Objective: To obtain an internship in robotic engineering, mechanical engineering, or related field where I can use my experience to work and learn with professional engineers in the research, development, design, analysis, testing, validation, or documentation process.

Education: Worcester Polytechnic Institute, Worcester MA
Bachelor of Science in Robotic Engineering, GPA 3.90 *May 2012*
Charles O. Thompson Scholar, Deans List, and Member of Tau Beta Pi

Avon High School, Avon CT
High School Diploma, GPA 3.84 *June 2008*
National Honor Society, three time Scholar Athlete, and Outstanding Achievement Award in Technology Education

Related Courses: Unified Robotics I-IV, Kinematics of Mechanisms, Static Systems, Stress Analysis Algorithms, Software Engineering, Foundations of Embedded Computer Systems, Control Engineering

Skills: Proficient with SolidWorks, Autodesk Inventor, Microsoft Office Suite, MATLAB, Eclipse, C and Java programming, UAV piloting and design

Projects: **Autonomous Robot** *October 2010*

- Fully implemented an embedded system that employed a 2-link robotic arm to autonomously sort objects by weight from a moving conveyer belt

Low Speed Wind Tunnel *June 2008*

- Researched, designed, built, and tested low speed wind tunnels
- Focused on basic aerodynamic principles and flow visualization, presented findings as culmination of project

Experience: **Energid Technologies Engineering Internship**, Concord MA, March 2010-present

- Worked on torso of a humanoid robot, involved general maintenance and final testing of joint limits, stereo vision cameras, and onboard computers
- Redesigned the hands of the humanoid robot to optimize grasping configuration, also designed injection molds in SolidWorks for several hand components
- Designed, built, and tested lower body of a 1 meter tall humanoid robot
- Researched and developed a 6 DOF parallel end effector with tunable compliance for medical applications. Designed, assembled, and tested several prototypes to validate different methods of achieving variable compliance.
- Assisted in designing and prototyping a robotic system for autonomous tracheal intubation.

Robotic Engineering Teaching Assistant, Worcester MA, March 2010-present

- Supervised lab sessions for robotic engineering courses
- Assisted students with homework problems or lab questions involving issues with mechanical design, programming, and debugging circuits