

Christopher Zawacki

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EDUCATION

Masters GPA: 3.74/4.00; Major GPA: 3.63/4.00; Cumulative GPA: 3.49/4.00

Candidate for M.S.E in Robotics 2016-2018
University of Pennsylvania
Candidate for B.S.E in Mechanical Engineering and Applied Mechanics 2013-2017
University of Pennsylvania
Candidate for B.S.E in Computer and Information Science 2013-2018
University of Pennsylvania
Minor in Mathematics 2017
University of Pennsylvania

TECHNICAL SKILLS

- **Languages:** C, C++, Java, Matlab, Python, C#, JavaScript, HTML, CSS
- **Areas of Focus:** Machine Learning, Embedded Systems, Mechatronics, Control Theory
- **Experienced With:** ROS, Solidworks CAD, Eagle PCB Design, Machining, Composite Materials, LaTeX

EXPERIENCE

Research Assistant in Kodlab - GRASP subsidiary 2015-Present
University of Pennsylvania

- Researched constant voltage, gait stabilizing leg design
- Designed and constructed new quadrupedal robot from scratch for the lab
- Explored multiarmed bandit style gait optimization: Link: [ICRA Submission](#)
- Current Project: Mathematical model of gait space found by bandit algorithm

Academic Project - Hospital blood bag delivery system 2015
University of Pennsylvania

- Designed and built an autonomous transport robot capable of traveling speeds of 3-4 mph with a max payload of 35lb
- LiDAR based navigation system running a ransac algorithm for wall detection.
- <http://camzawacki.github.io/projects/Hemoglobetrotter>

PROJECTS

Current Projects

- **pAInter:** Modifying custom 3D printer into painting platform for an AI agent
- **PCB Printer:** Designing and building a PCB etching machine
- **Learning RNN:** Modifying current Recurrent Neural Net designs to output functional code
- **AI Storytelling:** Designing systems that produce 'original' content with the goal of maximizing user enjoyment

Completed Projects

- **Stirling Engine:** Designed and machined a sterling engine electric generator
- **Standard RL:** Used reinforcement learning algorithm to teach a computer how to play Pac-man
- **3D Printing:** Built 3D printer from scratch
- **Neural Networks:** Used artificial neural net to predict outcome of NBA games