# Education

University of Pennsylvania, School of Engineering and Applied Science

**Cumulative GPA: 3.87**

Master of Science in Engineering, Expected May 2015 – Computer and Information Science

Bachelor of Science in Engineering, Expected May 2015 – Computer Engineering

**Honors:** Dean’s List (2010-2013) • Tau Beta Pi • Eta Kappa Nu • Rachleff Scholar

# Experience

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| University of Pennsylvania – Teaching Assistant (7 courses) | Spring 2011 - Present |

* Computer Architecture, Software Engineering (TA and Project Manager)
* Circuit-Level Modeling, Analog Circuit Analysis Lab, Digital Circuit Design and Lab, Java Programming
* Responsibilities: Held recitation and office hours, lead lab sections, wrote and graded homework

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| Hospital at the University of Pennsylvania – Department of Cardiovascular Surgery | Summer 2013 |

* Co-developed a life-critical application that matched candidates to donors and tracked organs throughout the transplant process. Programmed in ASP.NET MVC with C#.
* Adhered to the AGILE process for software design with project velocity and daily scrum meetings.
* Designed database schema, manager, and history using Entity Framework.
* Planned and implemented over 30% of test cases for the application.

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| University of Pennsylvania, Dr. Daniel Lee, Robotics – Research Assistant | Summer 2011-Spring 2013 |

* Quarter-finalist in RoboCup 2011, Istanbul, Turkey, and RoboCup 2012, Mexico City, Mexico.
* Worked with a large, existing code base written in C, C++, and Lua.
* Increased walk speed for bipedal robots by optimizing code and parameters resulting in faster approach time.
* Improved stability of fast walk through gyroscopic measurements and feedback to reduce falls per game.
* Developed geometric path planning using multidimensional splines reducing algorithmic complexity versus the more common graph-traversal methods.
* Implemented “dribble-then-kick” game strategy based on robot and ball location yielding more goals per game.

# Personal Projects

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| BevAlert | Fall 2013 |

* A microcontroller and web service to alert users when their drinks have reached their desired temperatures.

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| KiNaoMatics (kinaomatics.blogspot.com) | Spring 2012 |

* A control engine built with a Microsoft Kinect and programmed using Open CV in C++ to transmit a human’s joint positions to a humanoid robot so that the robot would mimic the human.

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| Consumer VOICE | Spring 2012 |

* A visually rich, touch-intensive survey application for psychotic patients – written for Android.

# Relevant Coursework

## Internet and Web Systems • Computer Organization • Operating Systems • Networking • Machine Learning • Databases •

Real-time Systems • Embedded Systems • Software Engineering • Digital Circuit Design • Circuit-level modeling

# Select Skills

## Java • C • C# • Python • Lua • C++ • Matlab • SQL • JavaScript • JQuery • UNIX • Bash • Git • SVN • Verilog • VHDL