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**EDUCATION:**

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BS Mechanical Engineering: *GPA 3.40 / In-Major GPA 3.70*

May 2013

MS Mechanical Engineering: *GPA 4.0*

Anticipated Graduation – December 2013

- SAT: 1510 (*Math: 770, Reading: 740*)
- National Achievement Semi-Finalist, National Merit Commended Scholar, AP Scholar with Distinction

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**WORK EXPERIENCE:**

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Structured Products Research Intern

Summer 2013

New York, NY

- Work directly with senior industry credit analysts to construct credit-oriented views on exposures in CLO portfolio. Perform various credit analysis, including company and industry research, forecasting of cash flows, ability to service debt, equity coverage, comparables analysis, and assessment of cost and capital structure.

Product Development/CAD Intern

Fall 2012 – Spring 2012

- Consulted with LINC LLC to develop a wheelchair securement system for public transportation. Primary focus: CAD and design studies.

Teaching Assistant, Numerical Methods

Fall 2012

- Assisted in teaching of coursework including Matlab and intro numerical methods.

Research & Development Mechanical Engineering Intern

Summer 2012

San Jose, CA

- Worked with senior engineers on a variety of projects including developing a precision mechanical gripper, developing assembly and part drawings, and developing thermal analysis methods for a micro-scale system.

Aspire REU/TIPeD Intern

Summer 2011

- Collaborated in a 5-member team of interns and professionals to develop a patent pending assistive technology in a Research for Undergraduates program sponsored by University of Pittsburgh's and Carnegie Mellon's QoLT.

Resident Assistant

Fall 2010 – Spring 2012

- Developed leadership skills and communication skills undergraduates by working closely with campus leaders and staff.

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**PROJECTS:**

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Bus Securement System

Summer 2011, Fall 2012 – Spring 2012

- Investigated product requirements, safety standards, and researched user experience to motivate revised design. Used product and market research to write a SBIR-II grant proposal.

Space Robotics: Skylight Carriage System

Spring 2012

- Worked in an 8 person group to develop robotic solutions to problems confronted in the Google Lunar X Prize mission.

Design II: Epi-Card -- (*Winner of Best Senior Project*)

Spring 2012

- Worked in a 6 person group to develop a highly portable wallet-sized epinephrine injector.

Precision Mechanical Gripper:

Summer 2012

- Worked with senior engineers to develop a highly precise gripper apparatus, stage, and method for assembling micro camera assemblies.
- Created detailed CAD models and ASME-Y14.5 drawings for parts using Pro/Engineer.

Motorcycle Top Box: Thermal Fluids

Spring 2012

- Worked in a 5 person team to research and design a cooling insert for a motorcycle top box.
- Created detailed CAD models and engineering drawings of cooling insert; performed FEA thermal and fluid flow analysis of system.

PPG Dissolution Rate System: Engineering Design Projects

Spring 2012

- Worked in 5 person team to develop system for quantifying relative dissolution rates of calcium hypochlorite in water for PPG industries.
- Acted as Project Lead; used formal work management processes to manage work flow.

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**SKILLS & PROFICIENCIES:**

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Microsoft Excel/Word

Solidworks Pro 2012

Pro/Engineer WF 5.0

Matlab

Mathcad

Java, HTML

ANSYS v12.0

Adobe Creative Suite

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**HOBBIES & ACTIVITIES:**

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Sigma Chi Fraternity (*Founding Father, Standards Chair, Derby Daddy, Risk Man*)

Fall 2010 – Present

Rugby 15s, 7s (*2011 National Qualifier*)

Spring 2011 – Present

Rugby Club

Fall 2009 – Present