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Objective

To obtain a position to utilize and advance my competencies in scientific research, mechanical design, and engineering development.

Work Experience

Mechanical Engineering Intern

National Robotics Engineering Center (NREC), Lawrenceville, PA 15201 (Dec 2013-Aug 2014)

Design or fabricate necessary parts on a series of mid-size autonomous and tele-operated service robots.

Machining Operations Intern

Space Exploration Technologies, Hawthorne, CA 90250 (May-Aug 2013)

Worked in the SpaceX machine shops and production floor, apprenticing in the flight engine production shop, and later in the R&D shop, taking test and flight parts from CAD to creation using Mastercam X6.

Undergraduate Teaching Fellow for course 24-370, Engineering Design I

Carnegie Mellon University, Pittsburgh, PA 15289 (Jan-May 2013)

Designed the course final project in motor choice and optimization, built testing rig and starter code for students with most code focus in MATLAB. Aided students with homework and project work.

Mechanical Engineering Machine Shop Work Study

Carnegie Mellon University, Pittsburgh, PA 15289 (Oct 2011-May 2012, Jan-May 2013)

Maintenance and repair of machines, as well as involvement teaching the undergraduate shop class and machining of simple to advanced student, professor, lab, and PhD-commissioned parts.

Structures Intern

Space Exploration Technologies, Hawthorne, CA 90250 (May-Aug 2012)

Designed, analyzed, and tested various composite flight parts, small parts and flight simulation testing rigs for the fairing of SpaceX's rocket Falcon 9 v1.1.

Mechanical/Wetlab Intern

Halcyon Molecular, Redwood City, CA 94063 (June-Aug 2011)

Improved efficiency in the company's mechanical and chemical processing of DNA, which included DNA labeling, straightening, and imaging with an S5500 SEM to produce snapshots of the house protein labeler.

Satellite Data Analyst/Intern

Lockheed Martin, Palo Alto, CA 94304 (Sept 2009-June 2010)

Analyzed graphical data collected from Cluster and Geotail satellites to add to knowledge of of plasma boundary magnetic reconnection data and how it relates to aurora activity and EM storms on Earth.

Volunteer Experience

International Service-Learning Engineering initiative

San Pedro, Philippines 4023 (May-June 2011)

CMU engineering service trip to build typhoon-sustainable houses/water sources in slum neighborhoods.

Fabrication Lab Design Internship

Stanford University FabLab, Stanford, CA 94305 (May-Aug 2009)

Worked with FabLab teams globally to promote independent fabrication of 3D computerized design, implemented new rapid-design prototyping methods, created a sensor-driven, light up toy castle.

Education

Carnegie Mellon University (BS 8/2010-5/2014) (MS 8/2014-12/2014)

Major: Mechanical Engineering BS/MS with music minor, BS 3.5/4.0 GPA MS 3.7/4.0 GPA

Carnegie Institute of Technology Dean's List, Spring 2013

Member of American Society of Mechanical Engineers, FSAE, Women's Leadership Program

Pittsburgh, PA 15289

Skills

Computers

Python, MATLAB
Solidworks/CAE Simulation
Mastercam X5/X6
Unigraphics NX
ANSYS
CorelDraw

Machines

Eight years fluent experience
with hand and CNC mill, lathe,
VTL, 3D printer, laser cutter,
and other shop tools
Novice MIG Welding

Personal

Enjoy challenges and problem
solving
Learn and adapt quickly, active
listener
Work well in teams, enjoy
collaboration under pressure

Interests and Activities

Autocross, soft robotics, cybernetics, augmented reality technology, hands-on design and fabrication, music, bass, singing, acroyoga and partner acrobatics, rock climbing, backpacking, urban exploration
Collegiate: CMU FSAE Drivetrain, CMU Roboclub, CoDe Lab Member, singer of band Memphis Hill
High School: FIRST Robotics Team 192 co-captain and drivetrain lead, chamber/concert choir

Referrals

Furnished upon request