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Janelle Mansfield

Department of Aeronautics and Astronautics

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Education

Massachusetts Institute of Technology, Cambridge, MA, intended graduation date: June 2015
Candidate for Bachelor of Science in Aeronautical/Astronautical Engineering with Applied International Studies minor, 5.0 GPA
Relevant Coursework: Differential Equations, Physics, Introduction to Aerospace Engineering
Sophomore Year Courseload: Materials and Structures, Fluids, Signals and Systems, Thermodynamics, Java Programming, Linear Algebra, Waves and Vibrations

Work Experience

Structural Integrity Associates — Englewood, CO
Intern — May-August 2012

- Programmed Excel macros to create a workbook-based program which imports and sorts finite element analysis data, calculates scaled stresses, and generates finite element modeling code input files.
- Wrote ANSYS finite element analysis code to run various thinned piping flaw models.
- Used my Excel program to prepare a thinned piping allowable flaw size calculation.
- Checked three calculations prepared for clients for input and numerical accuracy and correct application of Visual Basic programming.
- Searched for and plotted trends in strain-gage data collected from water turbines in order to approximate torque force values on turbine shafts.
- Identified and documented small bore piping from piping diagrams in order to prepare for vibration analysis and support Extended Power Uprate bids made by two nuclear plants.

Research Experience

MIT Interactive Robotics Group — Cambridge, MA
Research Assistant — January 2012-Present

- Developing a computer algorithm to monitor the coordination of disaster relief efforts via an online platform.
- Identified weak versus strong agreements and conversational features in two different data sets, searched for correlations between the features and agreement strengths, and developed and tested algorithms describing these relationships.

Skills

Computing: Proficient in Visual Basic, skilled with manipulation of data in Excel
Engineering/Design Experience: In Intro to Aerospace Engineering course, worked on teams of 4 and 7 students to design and build a radio-controlled blimp, autonomous Lego-Mindstorm rover. My team's blimp posted the fastest flight time out of seven teams.
Languages: Fluent in Spanish

Activities

Varsity Lightweight Division I Crew Team (2011-present), Associate News Editor for *The Tech*, Maseeh Hall Resident Associate Advisor and Orientation Leader (2012-2013 school year), Snowflake Ball Planning Committee Publicity Co-Chair (2012)