Timothy Jenks

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Current: 233 Massachusetts Ave.
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Education:

Massachusetts Institute of Technology — Cambridge, MA
Expected June 2013

B.S. in Mechanical Engineering, concentrating in Controls, Instrumentation, and Robotics.
Minors in Management and Energy. GPA: 4.96/5.0 (Major GPA: 5.0/5.0)
Coursework: Robotics, Artificial Intelligence, Design & Manufacturing, Dynamics and Feedback Control, Thermal Fluids, Power & Negotiation, Energy Economics and Policy, Marketing Management

Work Experience:

ExxonMobil Development Company — Houston, TX
Subsea Systems Summer Engineer — May-August 2012

- Identified corrosion concerns and failure modes on subsea hardware posed by new environmental conditions.
- Interfaced between Subsea and Materials functional groups (20-30 members each) to understand the requirements of each group and advise on acceptable tradeoffs for design revisions.
- Evaluated current design practices for performance and safety in the harsh environment and presented recommendations to engineers and management for revising requirements to meet anticipated challenges.
- Outlined and priced a multi-tiered testing plan to guide qualification of materials and design requirements.

MIT Computer Science and Artificial Intelligence Laboratory — Cambridge, MA
Undergraduate Research Assistant-Robot Locomotion Group — Jan 2011-May 2012, Aug 2012-Present

- Designed, built, and tested a wingeron airplane design for eventual flight through cluttered environments.
- Built a SolidWorks model of the aircraft for preliminary design analysis and rapid construction of parts.
- Created a modular design that allows for easy design upgrades and fast repairs, resulting in little downtime.
- Performed flight testing and system identification of the plane to study its dynamics.
- Created a mathematical model and simulation of the plane in Matlab for use in controller design and testing.
- Iterated and optimized construction techniques and the aircraft design in a new version based on updated design requirements and insight from observation and analysis of the previous design.

Cape Software — Houston, TX
Product Development Intern — Summer 2010, 2009, 2008

- Assisted in developing the new user interface for a flagship product using the programming language Runtime Revolution, now known as LiveCode.
- Observed users and solicited their feedback to analyze their needs of the product. Designed, assessed, and implemented improvements to the product to meet and exceed these needs.
- Created a software tool that performs tests on a PID control algorithm, and provides the user with recommended values for the controller tuning constants to appropriately tune the system.
- Developed Python code to automatically generate graphs in web pages for documenting control systems.

Team Projects:

Destination Imagination Technical Problem Solving — 1999-2009

- Designed and built electromechanical systems in small teams, integrating hardware and software components.
- Solutions included a hovercraft, centrifuge, autonomous vehicle, and indoor remote-control airplanes.
- Refined each solution through multiple design iterations to adhere to design requirements while completing a task, such as staying aloft for a period of time, in the most efficient and effective manner.

Skills:

Programming: Familiar with MATLAB, Java, Python, and C.
Design, Prototyping, and Construction: Experience with SolidWorks, a machine shop, wood shop, and laser cutter. Data analysis, system identification, and statistics work in MATLAB.

Awards & Activities:

- Tau Beta Pi Engineering Honor Society
- MIT Varsity Rifle, 2011 Conference All-Academic Team
- MIT Orientation Captain 2010-2012
- Zeta Psi Fraternity—Vice President
- Boston Half-Marathon, 2011 & 2012
- Boy Scouts—Eagle Scout, Order of the Arrow
- MIT Undergraduate Association (Student Government) Senate Vice-Speaker
- Winner of MIT's Artificial Intelligence class programming competition, Spring 2011