A. SINA BOOESHAGHI

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Education

Massachusetts Institute of Technology: Cambridge, MA **Class of 2017**

- Candidate for BS in Mechanical Engineering with a minor in Math GPA 4.5/5.0
- Coursework: *Thermal-fluids Engineering, Dynamics and Controls, Algorithms, Numerical Computation, Differential Equations, Mechanics of Materials, Multivariable Calculus, Classical Mechanics, Electricity and Magnetism, Biochemistry*
- Currently Enrolled: *Thermal-fluids Engineering II, Design and Manufacturing, Computational Fluid Dynamics, Probability*

Work Experience

Multidisciplinary Simulation Estimation & Assimilation Systems Lab: *MIT Undergraduate Researcher* **Present**

- Studied and researched mathematical models in order to dictate time-optimal paths of subsurface vehicles
- Simulated time-dependent fluid flows past immovable obstacles using MATLAB, to study oceanic flows

N12 Technologies: *Research, Systems, & Product Development Intern* **Summer '14**

- Designed, fabricated, and assembled a web-handling system for continuous carbon nanotube (CCNT) growth
- Designed and implemented a rubber extrusion ribbon as a viable long-term CCNT storage system
- Designed, fabricated, and assembled a CCNT transfer assembly for CCNT transfer from steel to resin medium

United States Army Corps of Engineers: *Research & Analyst Intern* **Summer '12**

- Conducted research on commercial motor vehicles and driver distraction, including cell phone distraction
- Modeled the effectiveness of instated policy for distracted driving and commercial vehicle accidents

Global Engineering & Scientific Solutions: *Field & Analyst Intern* **Summer '11 ,'12**

- Performed field investigation of various types of loss evaluations, topics including: *Deformation of Ladders due to External Forces, Stress Analysis, Study of Vehicular Kinematics of Motion, Product Failure Analysis*
- Assisted in stress and failure analysis of a ladder and determined failure modes under different constraints

Activities

FSAE Team: *Member of MIT's Formula 1 Team* **2014-Present**

- Member of a team developing improved vehicles for Formula 1 auto races
- Utilized machine shop tools to fabricate parts such as suspension rods, brake assemblies and steel disk brakes

MIT xFair Spring Career Fair: *Member of Corporate Relations Committee* **2014-Present**

- Effectively communicated with companies over their goals and ideas for their attendance at xFair
- Assisted the team by mitigating conflict and proposing solutions to problems

Leadership

American Society of Mechanical Engineers: *MIT* **2014-Present**

- Current President of the MIT Chapter
- Teacher Assistant for a SolidWorks class
- Reach out to professors to organize events such as Monstrous MechE & Faculty Luncheon

Speech & Debate: *Wellington High School* **2012-2013**

- Fundraising Director and Treasurer
- Coordinated with the other officers and managed fundraising events and raised $1000 per semester

Projects

Robot Vacuum Modeling: *Computer Science Individual Project* **2014**

- Developed a computer simulation model of an autonomous vacuum using Python
- Performed analysis of different 'walk' methods to test efficiency of room cleaning

Radon Mitigation System: *Science Fair Individual Project* **2009-2010**

- Developed a residential house mitigation system for radon gas which reduced radon gas concentration by 3x
- Aggregated, analyzed, and presented findings at Local, Regional and State Science Fair

Awards & Honors

- Valedictorian of Wellington High School (Class of 554 students) **2013**
- Placed 8th at the University of Pennsylvania National Debate Tournament **2012**
- 1st at Regional Science/Engineering Fair, 3rd at State **2009**

Skills & Languages

- NX, SolidWorks, AutoCAD, MATLAB, Arduino, Shop Tools, Python, LaTeX, Bash, Adobe Creative Suite (esp. Photoshop), Cinema 4D, Maya, Blender, Sony Vegas Pro, Instron Testing, Salsa Dancing, Licensed Boater, Cycling, Spanish (Conversational)