A. SINA BOOESHAGHI

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Education

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

- Candidate for BS in Math & Mechanical Engineering GPA 4.5/5.0
- Coursework: *Thermal-fluids Engineering I & II, Design & Manufacturing I & II, Dynamics & Controls, Non-Linear Dynamics, Algorithms, Computational Fluid Mechanics, Real Analysis, Mechanics of Materials, Calculus I II III, Probability, Biochemistry*

Work Experience

W.L. Gore & Associates: *New Product Development Intern, Research Division* **Summer '15**

- Designed and implemented a control system, GUI, and accessory parts to apply and monitor biaxial tension in thin films
- Outcomes include improved accuracy and stability in acquired data & estimated cost savings of $40,000 per unit

Multidisciplinary Simulation Estimation & Assimilation Systems Lab: *MIT Undergraduate Researcher* **2015**

- 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 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* **2014-2015**

- Member of a team that developed 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: *Director of Corporate Relations Committee* **2014-Present**

- Effectively led a team to communicate with and invite over 150 companies to xFair
- Managed the team by mitigating conflict and proposing solutions to problems

Leadership

American Society of Mechanical Engineers: *Co-President* **2014-Present**

- Teacher Assistant for a SolidWorks class
- Hosted Mechanical Engineering students from the University of Guanajuato, Mexico, for an exchange program

Undergraduate Association: *MIT* **2015-Present**

- Current Chair of the Committee on Education
- Managed a committee to solve grade transparency and technology related educational issues at MIT

Projects

Image Processing: *Computer Science Project* **Summer '15**

- Developed and packaged, into a GUI, a computer model to determine the cut quality of OD/ID parts on a laser cutter
- Product now in use by multiple Process Engineers to fine tune laser cut part production, saving weeks of time

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 (1st Place) and State Science Fair (3rd Place)

Awards & Honors

- Valedictorian of Wellington High School (Class of 554 students) **2013**
- Placed 8th at the University of Pennsylvania National Debate Tournament **2012**

Skills & Languages

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