

## **Rachael Aptowitz**

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### **EDUCATION**

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#### **Massachusetts Institute of Technology (MIT)**

**Cambridge, MA**

Candidate for Bachelor of Science in Mechanical Engineering, GPA: 4.3/5.0

June 2015 (expected)

- Concentration in Engineering for International Development and Minor in Literature
- Relevant Coursework: Thermodynamics, Heat Transfer, Numerical Computation for Mechanical Engineers, Electronics for Mechanical Systems, D-Lab Development, D-Lab Design for Scale, Engineering Materials, Dynamics, Calculus, Electricity and Magnetism, Biology, Chemistry

### **EXPERIENCE**

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#### **Air Liquide**

**Paris, France**

*Frugal Innovation Intern*

June 2013- August 2013

- Engineered new business models and applications for Air Liquide technology in emerging markets, with projects underway from hygiene to welding
- Assisted in integrating rapid prototyping in Air Liquide for new avenues in research and operation, including decisions for an internal prototyping facility
- Developed a technical case study for the AL Summer School, with students from 15 different countries

#### **MoringaConnect**

**Cambridge, MA and New Longoro, Ghana**

*Mechanical Designer*

September 2012- February 2013

- Designed processing technology with the Ghana Permaculture Institute (GPI), to increase income-generation from the sale of Moringa products for over 7,500 subsistence Moringa farmers in Ghana
- Built an affordable and scalable treadle-powered Moringa sheller to increase processing efficiency
- Presented to and gathered feedback from community members for future design changes
- Created hands-on science and engineering lessons for Primary through Secondary School classes

#### **EdX**

**Cambridge, MA**

*Content Team Intern*

June 2012- January 2013

- Developed course content for new online versions of MIT and Harvard courses using LaTeX
- Remodeled and programmed all problem sets and exams for 3.091x: Introduction to Solid State Chemistry for their integration into a online learning environment with 30,000 registered students

#### **MIT Sea Grant Autonomous Underwater Vehicle (AUV) Lab**

**Cambridge, MA**

*Researcher*

September 2012- March 2013

- Developed protocols for using AUV REX III to conduct area estimates of eelgrass meadows using videography and analysis of percent coverage to assess damage and restoration of eelgrass beds
- Surveyed eelgrass beds and gathered environmental data using REX III, LI-193 sensor and YSI Castaway CTD

#### **MIT Tech Callers**

**Cambridge, MA**

*Tech Caller*

February 2012- June 2012

- Established links between alumni and MIT community and secured alumni gifts to the Annual Fund

### **SKILLS**

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**Computer:** MATLAB, LaTeX, Microsoft Office (Word, Excel, PowerPoint)

**Languages:** Basic French

**Activities:** MIT Varsity Soccer, Alpha Phi Sorority, Society of Women Engineers (SWE), FIRST Robotics Team 3624 Mentor, MIT Interphase Program, Civic Leadership Institute