

# IVY MUCHUMA

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## OBJECTIVE

To obtain a full time position in an engineering or technological field.

## EDUCATION

### **Rensselaer Polytechnic Institute (RPI), Troy, NY**

**May 2014**

Bachelor of Science in Environmental Engineering

- **Rensselaer Leadership Award**

- In recognition of an outstanding record of academic and personal achievements, a strong commitment to excellence, and illustration of intellectual curiosity

- **Rensselaer Grant**

## RELEVANT EXPERIENCE

### **International Business Machines Corporation (IBM), East Fishkill, NY**

**Summer 2013**

Environmental Engineering Intern

- Designed on-site treatment process for Industrial Hazardous Waste which mitigated cost of off-site shipping on the order of \$100,000 biannually
- Problem solved and optimized issues with Ammonia Treatment System, CuS<sub>2</sub> feed to fab and various other treatment systems
- Designed and conducted tracer testing on Nitrification Bays suspected of short-circuiting
- Extensive research, laboratory work, and consultation

### **Environmental Process Design**

**Spring 2014**

- Led a team in designing a solar powered water intake structure for developing communities
- Satisfied multiple design constraints including regulations, safety, constructability, sustainability, and various stakeholder perspectives

### **Environmental Measurements**

**Fall 2013**

- Modern methods used in analysis of environmental samples for monitoring and research purposes.

### **Biological processes in Environmental Engineering**

**Fall 2013**

- Laboratory work in microbial techniques. Experimental analysis of natural and engineered biological processes, emphasizing experimental design, data evaluation, and report writing.

### **Physicochemical Processes in Environmental Engineering**

**Spring 2013**

- Completed a design project where I developed a computer model of a packed tower aeration system.

### **Introduction to Engineering Design**

**Fall 2012**

- Designed and produced a self-sustaining sensor unit as part of a seven member team. I was responsible for the materials subsystem. I ensured that the materials used in the development of our sensor passed a Life Cycle Assessment matrix while alleviating cost.

## SKILLS

### **Software**

- MS Office, Lotus Notes, MATLAB, NX 7.5 CAD, HEC HMS, GIS, LabVIEW, Avid, Basic Python

### **Languages**

- Proficient in English and **Swahili**, and a working knowledge in *French* and *Japanese*

### **Other**

- ISO 14000, HAZWOPER, Bench scale Testing, Field Work, Sampling, Report Writing, CPR, First Aid, Self-starter, Self-management, Multitasking, Research

## ACTIVITIES

### Society of Environmental Professionals

President, RPI

**2012-2014**

### National Society Black Engineers

Senator, RPI

**2011-2012**

Freshman Secretary, RPI

**2010-2011**

### Teams

Track and Field, RPI (Player of the Year, All-American Athlete)

**2010-2014**

Track and Field, Nashua North (Two-time All Star Athlete, Captain)

**2008-2010**

### Volunteer Positions

Nashua Soup Kitchen  
Spearheaded camp cabins to over 60 adolescents

**2008-2010**  
**2011**