
Katie MacKenzie

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EDUCATION

Smith College Northampton, MA
Bachelor of Science in Engineering Science (Expected May, 2011), *3.60 GPA*
Awards: Dean's List (2007-09), First Group Scholar (2008)
Ford Motor Company Prize for Sustainability (2009)

University of Edinburgh Edinburgh, Scotland
Butler University Study Abroad Program, Spring 2010

WORK EXPERIENCE

Glumac International San Francisco, CA
Mechanical Department Intern
January 2011

- Researched air and water quality for the purpose of natural ventilation and recycled water applications
- Conducted HVAC loading using TRANE® Trace™ 700 and prepared 3D CAD drawings for energy analyses

Smith College Summer Research Northampton, MA
Research Assistant
Summer 2010

- Analyzed and validated models for thermal energy losses of campus buildings
- Collected data using engineering equipment and Department of Energy eQUEST simulation software

Smith College Office of Sustainability Northampton, MA
Student Intern
Fall 2009

- Researched biofuel options for Smith College's Combined Heat and Power (CHP) system
- This information was presented in the college's Climate Action Plan (President's Climate Commitment for American College & University)

National Association of Home Builders (NAHB) Research Center Upper Marlboro, MD
Engineering Intern
Summer 2009

- Ran energy simulations and analyzed homes participating in the EnergyValue Housing Awards program
- Gained computer and programming skills for EnergyGauge, Microsoft Word, Excel, and Access

Westhampton Library Energy Analysis Northampton, MA
Smith College Engineering Special Studies Research
2008 - 2009

- Researched and calculated energy efficiency solutions for preliminary design stage
- Obtained experience in research, microcontroller and MATLAB programming, 3-D modeling, and presentation skills

Springfield STEM Academy Middle School Springfield, MA
Smith College Special Studies Teaching Position
Spring 2009

- Designed and taught hands-on engineering design process and energy efficient building design lessons
- Acquired new skills creating interactive and engaging PowerPoints and working on a team

Portland Wiz Kids Portland, OR
Teacher
Summer 2008

- Taught hands-on engineering and science summer courses for elementary to high school students
- Courses included computer animation programming, robotics, and engineering discipline projects

Kumon Math and Reading Learning Center Lake Oswego, OR
Tutor
2006 - 2008

- Tutored in both mathematics and reading
- Worked with K-12 students of varying learning levels, from struggling to excelling

COMPUTER AND MACHINE SKILLS

Microsoft Word, Excel, PowerPoint, Proficient on Mac and PC platforms, Autodesk 2D AutoCAD and 3D Revit, SolidWorks, MATLAB, EnergyGauge, eQUEST, TRANE® Trace™ 700, LoggerPro, Final Cut Pro, Python Programming, Laser cutting technology, metal, machine shop, and rapid prototyping printer

ACTIVITIES AND COMMUNITY SERVICE

Smith College Bicycle Kitchen, Member, Treasurer, Co-Manager (2007 to present, 2008-09, 2010-present)
World Wide Opportunities on Organic Farms (WWOOF) in Brussels, Belgium, Volunteer (Summer 2010)
Smith College Engineers for a Sustainable World, Co-President and Treasurer (2008)
Outdoor Movie Night Fundraiser, Founder (2004-08)
FIRST Lego Robotics, Mentor (2004-06)

REFERENCES

Debra Sagan; NAHB Research Center, Program Coordinator (301.430.6210)
