

# Elizabeth Kneen

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Ottumwa, IA 52501

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## EDUCATION

### **Franklin W. Olin College of Engineering**

- B.S. in Mechanical Engineering
- Four year, full-tuition, merit scholarship

Needham, MA  
Class of 2008

### **Babson College**

- M.S. in Management with a concentration in Technological Entrepreneurship

Babson Park, MA  
Class of 2008

## WORK EXPERIENCE

### **Just Milk: Mother-To-Child Breastfeeding HIV Prevention**

- Developed as a participant at the International Development Design Summit at MIT
- Working to invent and design a specialized nipple shield for breastfeeding that inactivates the HIV without harming the baby
- Gates Foundation Grand Challenges in Health Innovations grant recipient, two patents pending
- Collaborating with Family Health International, Cambridge and Drexel Universities, and the Centers for Disease Control

Distributed International Locations  
Mid-July 2008-Present

### **International Development Enterprises – Water Technologies Volunteer Intern**

- Conducted field studies and needs assessments of small-scale rural farmers
- Developed designs for treadle pumps to meet local needs and improve functionality

Addis Ababa, Ethiopia  
Feb-Mar 2009

### **Management Engineers – Automotive Technical Strategy Intern**

- Researched and developed comprehensive studies on power electronics modules and energy storage systems in hybrid and electric vehicles for a major German automotive OEM

Düsseldorf, Germany  
Fall 2008

### **GE - Transportation – Remote Diagnostics Engineering and Product Development Intern**

- *Generation II Communications Management Unit*
  - Developed mechanical design for housing, connectors, wiring, and PCBs from concept through production prototype
  - Determined thermal cooling system required for unit through analytical, experimental, and FEA analysis
  - Found and determined suppliers through competitive bidding and technical analysis of proposals
  - Conceptual design and material research for new locomotive solid-state memory black box
- *Community Service Committee Chair*
  - Organized the committee and service events for 300+ interns and co-ops including co-organizing five Make-a-Wish fundraisers with the organization that rose over \$4000. Logged 48 hours of non-administrative service in 7 weeks

Eric, PA  
Summer 2007

### **Al-jon, Inc. Lean Manufacturing Engineer and Drafter**

- Implemented product design improvements incorporating lean manufacturing techniques using Inventor software

Ottumwa, IA  
Winter 2007, 2001, 2000

### **American Axle and Manufacturing— Product Engineering Internship**

- Designed and analyzed automotive differential gears and transmission housing for seven international product lines

Detroit, MI  
Summer 2006

## COLLEGE RESEARCH AND LEADERSHIP ACTIVITIES

### **Senior Consulting Program for Engineers – Boston Scientific**

- Managed and worked with team of five peers in redesigning an endoscopic product to improve manufacturing processes and captured market segment, patent pending

Fall 2007 - Spring 2008

### **Product Design and Development—P’Kolino**

- Worked with team of 7 Babson MBA and RISD industrial design students to develop an outdoor play product based on extensive user observations and research for P’Kolino to expand their market while keeping within their current user demographic
- Patent pending, company is working to bring our final product to market

Fall 2007

### **Biomimetic Robotics Research Lab**

- *Robotic Prosthetic Hand Research Lead:* Designed actuation system and mechanical skeleton for prosthetic hand by cable tendons.
- *Programmable Search and Rescue Snake Team Manager:* Co-designed and fabricated a tetherless robotic serpentine snake capable of 3-D motion. Fully programmed with model or run by real-time joystick. Managed team of five, budget, and all paperwork

Spring 2007  
Fall 2005-Spring 2006

### **Society of Automotive Engineers (SAE) Mini-Baja—Inaugural Olin Team**

- Responsible for innovation of design ideas, testing of concepts, spatial visualizations and models, and fabrication of chassis.
- Led welding team in fabricating chassis. Over 80 hours of welding logged in one month

Fall 2004-Spring 2005

## ACQUIRED SKILLS AND TRAINING

Machine shop certification (MIG, spot welding, lathe, manual and cnc mill, injection mold, vacuumform, laser cutter, basic machinery and tools), SolidWorks, Inventor, CosmosWorks, AutoCAD, Matlab, beginners level Python and Visual Python, Microsoft Word/Excel/PowerPoint/Outlook/Project, Latex, Adobe Suite, construction techniques, advanced automotive engine and drivetrain repair