

# CELINE TA

ENGINEERING + INDUSTRIAL DESIGN

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## EDUCATION

**FRANKLIN W. OLIN COLLEGE OF ENGINEERING**, Needham, MA  
National Merit Scholar, Candidate for Bachelor of Science, Engineering, Class of 2017  
Concentration in Product Design and Development, GPA 3.85

## EXPERIENCE

**EURO-PRO**, Quality Engineering (New Product Development) Intern May 2014- August 2014  
Leading cross-functional team to organize national investigation of maneuverability needs for Shark brand vacuum cleaners, with the goal of developing real-world tests and key performance indices (KPIs). Create interview protocols, draft qualifiers and surveys, and moderate both internal usability studies and in-home observational studies (IHOSs) in preparation for the national study and three other products in development. Aid with quality management documents, out-of-box and engineering teardowns, and testing. Familiar with full agile product development process in a corporate setting.

**PROSTHETIC GRIP CONTROL**, Electrical Lead October 2014- December 2014  
Electrical lead on highly-integrated four-person team developing a low-cost smart grip feedback and control system for below-the-elbow prostheses, designed to facilitate finer motion control and alleviate muscle strain. Responsibilities include sensor selection and characterization, software implementation (Arduino) for sensors, wiring layout, calculating power specifications and battery selection.

**ENGINEERING FOR HUMANITY**, Student Designer January 2013- May 2014  
Application of IDEO design process, from user research to development of a customized product for an older couple, one of whom dealt with macular degeneration. A thorough understanding of her visual experience led to an elegant cutting board and a measuring cup that enables her to cook unhindered.

**OLIN ROBOTIC SAILING**, Mechanical Design Subteam August 2013- May 2014  
Designing and implementing motor- based rudder and sail actuation systems, obtaining parts quotes, and testing sensors and corresponding electronics for smarter actuation control. Individual and partner work, frequently interfacing with other subteams to ensure compatibility across subsystems.

## INTERESTS

### MIXED-MEDIA AND PAPER CRAFT

Self- study of pop-ups, sliceforms, and other trans-dimensional works as a craft and as rapid prototyping methods, and in relation to alternative control systems, as in E-origami or 4D printing.

### DESIGN RESEARCH

Learning-focused research and co-design of products for older adults (Stanford Design Challenge) and workspaces, under professor mentorship. Co-lead organization of design conference Rethink Education, as board member of the Foundry, the on-campus entrepreneurship group.

## SKILLS

### DESIGN

In-depth interview and rapid prototyping experience

Familiar with SolidWorks, Photoshop, Illustrator, InDesign

### DESIGN

Comfortable with Python, Java, Arduino, and MATLAB  
Building on HTML/CSS

Object-oriented programming

### FABRICATION

Basic machine shop training, brazing, 3D printing, manual mill, laser cutting, routing