

# Soon Jae Kwon

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## Education

- **University of Pennsylvania, School of Engineering and Applied Science (SEAS)** **Philadelphia, PA**  
*Bachelor of Science in Engineering (BSE) in Bioengineering* *Fall 2009 - Spring 2013*

## Projects

- **Troll Poll - www.trollpoll.me** **San Francisco, CA**  
*Clone of Poll Everywhere's live audience polling feature* *Fall 2013*
  - Used Backbone.js and Rails RESTful API for a feature-rich, single-page application
  - Implemented Twilio and Pusher API for instant data reload upon receiving sms
  - Incorporated bootstrapping and AJAX queries to reduce HTTP requests
  - Customized model data sent by server by overwriting default as\_json in Rails
- **Simple Chat** **San Francisco, CA**  
*Simple chatting application supporting multiple anonymous users* *Fall 2013*
  - Used Node.js and Socket.io to create a standalone JS app updating in realtime
  - Implemented automatic guest naming and nickname assigning
- **Basic Active Record** **San Francisco, CA**  
*De-abstraction of core active record methods and associations* *Fall 2013*
  - Recoded model associations and mass assignment
  - Implemented SQL for models to connect to relevant database tables
- **Basic Rails** **San Francisco, CA**  
*De-abstraction of core Rails functionality* *Fall 2013*
  - Added ERB template evaluation and rendering
  - Implemented sessions, cookies, and params
- **Games in Ruby and Javascript** **San Francisco, CA**  
*Various popular games recoded in Ruby and Javascript* *Fall 2013*
  - Used Javascript and jQuery to build in-browser Asteroids and Snake
  - Used Ruby to build command line Chess, Checkers, Hangman, and Poker

## Experience

- **Tung Kay Fun Laboratory** **University of Pennsylvania, PA**  
*Product Designer, Bioengineer* *Fall 2012 - Spring 2013*
  - Designed and programmed Arduino-based device to assist children with Cerebral Palsy (CP) to operate a digital camera
  - Developed Arduino-based automated pill dispensing system
- **Molecular & Computational Genomics Laboratory** **Samsung & SKK University, Korea**  
*Bioinformatics Intern* *Summer 2012*
  - Programmed Python script using the Biopython toolset to locate all instances and close variants of user-specified 7-mer DNA sequence match sites in the human genome
- **Department of Neurosurgery** **Pennsylvania Hopsital, PA**  
*Preceptee, Optimization/Systems Engineer* *Spring Semester 2011*
  - Programmed MATLAB script to analyze live feeds from electrodes being implanted into a patient's brain during Deep Brain Stimulation (DBS)
- **Laboratory for Nanostructured Biointerfaces** **KAIST University, Korea**  
*Fabrication Intern* *Summer 2010*
  - Participated in in-vitro synthesis and testing of polymer-dsRNA complexes

## Technical Skills

**Programming:** Matlab, Python, Ruby on Rails, Javascript, HTML/CSS, jQuery, Backbone.js, Node.js, SQL  
**Languages:** Fluent in English and Korean, Proficient in Japanese, and Conversational in Spanish