Soon Jae Kwon

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sjportfolio.herokuapp.com
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Education

- **University of Pennsylvania, School of Engineering and Applied Science (SEAS)** **Philadelphia, PA**
  Master of Biotechnology: Biopharmaceuticals/Engineering Biotechnology Track *Fall 2014 - Present*
- **University of Pennsylvania, School of Engineering and Applied Science (SEAS)** **Philadelphia, PA**
  Bachelor of Science in Engineering (BSE) in Bioengineering *Fall 2009 - Spring 2013*
  - Coursework: Soft Materials, Medical Devices, Medical Imaging, Nanotechnology, Physical Chemistry, Molecular Biology, Clinical Applications, Engineering Finance, Corrosion Mechanics, Computer Science

Technical Skills

Programming: Matlab, Python, Ruby on Rails, Javascript, HTML/CSS, BackboneJS, AngularJS, SQL, Arduino
Languages: Fluent in English and Korean, Proficient in Japanese, and Conversational in Spanish

Experience

- **Smilow Center for Translational Research** **University of Pennsylvania, PA**
  Bioinformatics Technician *Spring 2015 - Present*
  - Created python scripts to automate DNase-Seq data processing pipelines
  - Cleaned genomic data for use in digital genomic footprinting
- **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 standard point-and-shoot cameras using only ability switches
  - 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 (nucleation bulge) 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*
  - Scripted a Matlab algorithm to indicate correct placement of surgical electrodes in the subthalamic nucleus of the brain for Deep Brain Stimulation (DBS) surgery using patient data
- **Laboratory for Nanostructured Biointerfaces** **KAIST University, Korea**
  Fabrication Intern *Summer 2010*
  - Participated in in-vitro synthesis and testing of polymer-dsRNA complexes as a delivery mechanism for siRNA knockdown of cancer cell activity

Projects

- **Troll Poll - trollpoll.herokuapp.com** **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
- **Personal Portfolio - sjportfolio.herokuapp.com** **San Francisco, CA**
  Portfolio site with custom HTML/CSS and graphic design *Fall 2013*
  - Custom templating and CSS styling without using popular frameworks
  - Custom designed logos and graphics using Photoshop and Illustrator
- **BOW Alumni - bowalumni.herokuapp.com** **San Francisco, CA**
  A simple web app for members of Duke's BOW alumni to keep in touch *Winter 2013*
  - Used Bootstrap(by Twitter), Backbone.js, and Rails backend
  - Implemented Google Maps API to display member locations
  - Manually added CSRF tokens to certain validation requests to work with Devise