

# Sonia Phene

69 Brown St., Box 3512, Providence, RI 02192 · sonia\_phene@brown.edu · <http://soniaphene.github.io>

---

## EDUCATION

**Brown University**, 4.0 GPA, Bachelor of Science in Computer Science **Providence, RI, Class of 2015**

- Relevant courses include Web Applications, Data Science, Artificial Intelligence, Computer Systems

---

## COMPUTER ENVIRONMENT

- Languages: Proficient in Java, Python, Javascript; experience in C, R, Matlab, HTML/CSS, STATA
- Operating tools, systems: Proficient in Eclipse, IntelliJ, Git, Maven; comfortable with Linux, Mac, and PC

---

## INDUSTRY EXPERIENCE

**Zynga**, Software Engineering Intern **San Francisco, CA, Summer 2014**

- Coded in R, Java to write a scalable (for millions DAU data) implementation of Gaussian process regression
- Used this regression to personalize the difficulty of a game level for each player based on player's skill level
- Led the machine learning part of dynamic difficulty tuning; coordinated with game team, data scientists

**Google**, Android Camp Participant **Mountain View, CA, June 2013**

- Coded in Java and XML using Eclipse and the newly-released Android Studio to develop Android Apps
- Participated in rigorous workshops about mobile app development and creating good user interfaces
- Developed an Android game using Google APIs to let users guess locations of pictures their friends share

**Open Technology Institute at the New America Foundation**, Intern **Washington, DC, Summer 2013**

- Participated in the development of a wireless mesh network that employs user devices to enable communication between nodes or allow access to the Internet through one of the nodes
- Coded in Python on the user interface to help develop this open source communication tool

**U.S. Army Research Office**, Undergraduate Research Apprenticeship Program **Washington, DC, Summer 2012**

- Worked on the formulation of (stochastic) optimization models for the design of bike-sharing networks
- Developed a real-world, applicable solution to the problem of redistribution for 1600 bikes at over 175 stations using actual data from the Capital Bikeshare network in DC and programming in AMPL

---

## PROJECTS

**Yelp Business Rating Predictor** **Spring 2014**

- Wrote an implementation of K-Nearest Neighbors (which outperformed scikit-learn's implementation) using 16K Yelp businesses to estimate rating based on location/categories, performed with 81% accuracy

**Web Application for "Connective"** **Spring 2014**

- Built website to connect travelers with locals by posting and booking trips; coded in Node.js and Javascript

**Movie Recommendation System** **March 2014**

- Used Amazon Elastic MapReduce, python to recommend similar movies based on ratings of 190k movies

**Face Detector** **December 2013**

- Coded in MATLAB to create a face detector with 90.8% accuracy using Histogram of Gradients features

---

## RELEVANT EXPERIENCE

**Brown Computer Science Department**, Teaching Assistant **Providence, RI, August 2013-Present**

- Head TA for CS15, class of 300+ students and staff of 34 TAs; also TA for data structures/algorithms class
- Helped students design and debug large (~1000 lines) Java projects, taught weekly sections, ran labs

**Brown Robotics Lab**, Research Assistant **Providence, RI, January 2014-Present**

- Coded in C and used ROS to develop a relay system for communicating with robots

**Brown Women in Computer Science Mentor** **Providence, RI, August 2013-Present**

- Mentored underclassmen and held weekly campus events/discussions to get people excited about CS

### CS Conferences and Hackathons

- Invited to attend Google I/O and Google Research Lab 2014, presented at Bay Area Women in Analytics Meetup 2014; participated in Graphlab Conference 2014, Harvard WeCode 2014 Hackathon, Hack@Brown

---

## HOBBIES

Giving campus tours and information sessions at Brown, writing scripts to automate tasks, coding solvers for puzzles like Sudoku/Scramble, reading articles about AI