

# Gaurav Garg

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## EDUCATION

### University of California, Berkeley

Berkeley, CA

B.S. Electrical Engineering and Computer Sciences

Expected May, 2017

GPA: 3.54/4.0

*Relevant Coursework:* Structure and Interpretation of Computer Programs (CS 61A), **Data Structures** (CS 61B), **iOS Game Development** (DeCal), Calculus (Math 1A & 1B). *Enrolled:* **Machine Structures** (CS 61C), **Linear Algebra** and Differential Equations (Math 54). *Spring 2015:* **Operating Systems** and System Programming (CS 162), **Unix** (CS 9E), **Discrete Math** and **Probability Theory** (CS 70).

### The Doon School, 2013

Scored 100% in Computer Science in both ISC and ICSE national exams. Recipient of the Duke of Edinburgh award. Received editor's award and featured on front page of online fiction magazine TeenInk.

## EXPERIENCE

### Infosys | Software Development Intern

Jun 2014 – Aug 2014

- Successfully implemented a **JavaScript** intrusion alert system to detect **Cross-site scripting** (XSS) attacks on live **web applications** in real time.
- Achieved by cloning response HTMLs from the **Tomcat** server using **Filters** and executing them via **JSP** on a **headless browser (PhantomJS)** with overridden JS methods. Made a basic admin portal to view the attack log.
- Presented documentation and report and demoed the software for the senior team of Infosys Labs.
- Awarded second runner up in the annual Infosys InStep **Business Plan** Competition against 122 participants from top universities. Presented on Initiating operations in Colombia and why that is a strategic move.

### CITRIS Mobile App Challenge | App Developer

Feb 2014 – May 2014

- Developer at team HandiRoute for the CITRIS Mobile app challenge. HandiRoute is an **Android application** designed to find disabled friendly areas. Achieved by **crowdsourcing** data and using the **Google maps API**.

### CS 61A Course Staff | Lab Assistant

Feb 2014 – May 2014

- Assisted students with projects, labs, homework and taught debugging techniques and best coding practices.

### Berkeley Centre for New Media | Front End and AI Developer

Sep 2013 – Feb 2014

- Implemented front end for the **Web App**, Turing Test Tournament using **JavaScript (jQuery)** and **Bootstrap**.
- Designed an **artificially intelligent** chatbot for the app using **ChatScript**.
- Collaborated using **Git** and pair programming. Organized the 'Meet My Bot' **hackathon** to promote the website.

## PROJECTS

**Parallelized Breadth First Search.** Wrote software to strongly solve a sliding puzzle using **BFS traversal** to create the **game tree**. Implemented in **MapReduce** model using the **Apache Spark** framework, optimized by **partitioning** and **hashing**. Ran the implementation on a cluster of Amazon Web Services Elastic Compute Cloud (AWS EC2) servers.

**Image Edge Detection.** Wrote Java program to implement **blurring** and **Sobel edge detection** algorithms on color images and compress the TIFF format output using **run-length encoding** to reduce file size.

**Invaders.** Developed An iOS version of the classic game Space Invaders using **Sprite Builder** for animation and **physics engine** to detect collisions.

**YouTube Side Search.** Built **Chrome extension** that adds a search box to the sidebar on YouTube and uses the **YouTube data API** to allow the user to search and view results on the sidebar while watching the video.

## SKILLS

Proficient: Python • Java • JavaScript • HTML

Experienced: C • Spark (MapReduce) • MIPS • Scheme • CSS • iOS and Android app development • Git

*Last Updated on Nov 23, 2014*