

Gaurav Garg

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EDUCATION

University of California, Berkeley

B.S. Electrical Engineering and Computer Sciences
GPA: 3.54/4.0

Berkeley, CA

Expected May, 2017

Relevant Coursework: Structure and Interpretation of Computer Programs (CS 61A), **Data Structures** (CS 61B), **iOS Game Development** (DeCal), Calculus (Math 1A & 1B), Physics for scientists and engineers (Phy 7A), *Enrolled:* **Machine Structures** (CS 61C), Multivariable Calculus (Math 53), **Linear Algebra** and Differential Equations (Math 54). *Spring 2015:* **Operating Systems** and System Programming (CS 162), **Unix** (CS 9E), Discrete Mathematics and **Probability Theory** (CS 70).

The Doon School, 2013

SAT I: 2180 [Writing: 770 | Math: 760 | Reading: 650]. SAT Physics: 780. SAT Math 2: 790. Scored 100% in Computer Science in both ISC and ICSE national exams. Recipient of the Duke of Edinburgh award.

EXPERIENCE

Infosys | Software Development Intern

Jun 2014 – Aug 2014

Implemented a **JavaScript** intrusion alert system to detect **Cross-site scripting** (XSS) attacks on live **web applications** in real time. Achieved by cloning the response HTML and deploying **headless browsers** (**PhantomJS**) on the server (**Tomcat**) using **JSP**. Made a basic admin portal to view the attack log.

Awarded second runner up in the annual Infosys InStep **Business Plan** Competition. A record total of 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, lab work, homework and taught debugging techniques and good 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**. The team collaborated using **Git**. 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 search and view results on the sidebar while watching the video.

Time Capsule. Published **Windows Phone app** that displays the calendar for any given date including options for AD and BC. The < 1 MB app works offline and is capable of computing inputs such as May 1423 BC.

SKILLS

Java • Python • JavaScript • C • HTML • Spark (MapReduce) • MIPS • Scheme • CSS • PhantomJS • ChatScript • Git