Vaarnan Drolia

25, Prince Georges' Park Residences, #07-06, Singapore – 118424

☏ +65 9738 1436 • ✉ vaarnan@gmail.com • ⌂ http://vaarnan.com

 vellvisher •   vaarnan

I build things.

Education

National University of Singapore   **4.51/5.00 (GPA)**

Bachelor of Computing (Honours) in Computer Science   *August 2010 - May 2014*

- Dean's List - Sem 2, 2012-13
- **Top 2%** in the Software Engineering course out of 250 students
- **Top Student** in the Computer Security course out of 80 students
- **Top 5%** in the Parallel and Distributed Algorithms course out of 60 students
- Singapore Airlines - Neptune Orient Lines Scholar

St. James' School

Higher Secondary Education, 96.25%   *April 1997 - May 2010*

- **100%** in Computer Science for both 'A' and 'O' Level Equivalents
- **97.2%** in Indian 'O' Level Equivalent (ICSE)

Work Experience

Google Inc.   **Cambridge, Massachusetts**

Software Engineering Intern, Play Magazines   *May 2013 - August 2013*

- Developed a new Play Magazines/Currents client (for an unreleased Android device)
- Added APIs to the backend services to support the new Android client
- Became proficient in a range of Google technologies such as ProtocolBuffers, Guice and Guava

National University of Singapore

Teaching Assistant, Software Engineering   *August 2012 - December 2012*

- Led a class of 17 students and guided 4 teams as they made their first real-world application
- Initiated classroom discussions on several topics related to Software Engineering

National University of Singapore

Research Assistant, Data Mining and Visualization   *May 2012 - July 2012*

- Developed visualizations of Twitter and Facebook data using multi-level Tag Clouds with d3.js
- Deployed the back-end server on Apache Tomcat + Jersey and the Front-End on Heroku in PHP
- Integrated the Google Maps API to add location centric information to the data

IBM Corporation   **Singapore**

Software Engineer, Tivoli Division   *May 2011 - July 2011*

- Developed a command-line interface for the Tivoli Test Automation Framework using Python and Java
- Enabled testers to deploy servers and execute automated tests on remote worker machines with no coding
- Converted Jython into CPython improving execution time and responsiveness by several orders of magnitude

Project Papers

- Enhancing NUSNET using Two-Factor Authentication   2012
- Analyzing Low Level Issues Relating to the Security of RFID/NFC Cards   2012
- Analysis of the BFS Scheduler in FreeBSD   2011

Project Experience

HTML5 Applications
- LearnLobe - Digital Whiteboard with video-conferencing for students (using WebRTC)
- Kontitude - Conference organizer to manage event attendees using location and data services
- MysteryStory - Game which promotes innocuous learning of AED

iOS Applications
- KBuddy: iPad Karaoke application with a Ruby on Rails + MongoDB backend
- Huff n Puff: iPad "clone" of Angry Birds with the implementation of a Physics Engine

CS2103 (Software Engineering): Led a team of 4 to develop - QuickToDo Task Manager in Java
- Project inducted into the Hall of Fame for the course
- Developed natural language input, software updating and Google Calendar Integration

CS1101S (Programming Methodology):
- Took the module CS1101S (Programming Methodology) offered only to 60 students in the **MIT Scheme** language and placed 2nd in a Robot Building Competition

Course Work

- Parallel and Distributed Algorithms - Bayesian consensus, Self-Stabilization, Non-blocking data structures, Mutual Exclusion, ABA Problem
- Security Practice - Explored various attacks like buffer overflows, heap overflows, data fuzzing, XSS attacks, DoS Attacks, Network and Vulnerability Scanners, ARP Poisoning and IP Spoofing
- Parallel Computing - Basketball simulation (OpenMPI) and Matrix Multiplication Intel SIMD
- Machine Learning - Inverse Document Frequency, Naive Bayes, Genetic Algorithms, Artificial Neural Networks, Gradient Descent

Tech Skills

- Java, Objective-C, Python, C++, C, Scheme, JavaScript, PHP, HTML5, Ruby
- Experience with a wide range of operating systems in both Windows and Unix Environments

Awards and Accomplishments

Competitions
- Tata Consultancy Services IT Wiz Quiz Competition - National Winner with over 3.5 million participants countrywide — 2009

Academic
- Medal for Academic Excellence in ISC — 2010
- Bishop's Medal for Academic Excellence - Top Student ICSE — 2008

Service
- Principal's Award for the Most Outstanding Pupil — 2009-10
- C.V. Shunker Award for Integrity and Service — 2009-10
- Reverend Canon Basil Manuel Award for the Best Scout — 2009-10

Co-Curricular Activities

National University of Singapore
- Resident Assistant — 2010-2011

St. James' School
- School Captain and President of Student's Council — 2009-2010
- Troop Leader of Boy Scouts Association — 2008-2010
- Nature Club President — 2009-2010