

# Vaarnan Drolia

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*I build stuff.*

## Education

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### National University of Singapore

*Bachelor of Computing in Computer Science*

*May, 2014*

- Full scholarship covering tuition fees, living and accommodation allowances
- **Top 2%** in the Software Engineering course out of 250 students

### St. James' School

*Higher Secondary Education, 96.25%*

*1997-2010*

- **100%** in Computer Science for both 'A' and 'O' Level Equivalents
- **97.2%** in Indian 'O' Level Equivalent (ICSE)
- **98 Percentile** in SAT 1, 2230/2400 (Critical Reading - 750, Writing - 710, Math - 770)

## Work Experience

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### National University of Singapore

*Teaching Assistant, Software Engineering*

*August 2012 - December 2012*

- Lead 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 Singapore

*Software Engineer, Tivoli Division*

*May 2011 - July 2011*

- Developed a command-line interface for the Tivoli Test Automation Framework using Python and Java
- Wrote shell scripts for automated deployment on server platforms such as Windows, Linux, Solaris
- Enabled testers to deploy automated tests on remote worker machines with no coding
- Converted Jython code into pure CPython code which significantly improved execution time and responsiveness by several orders of magnitude

## Project Experience

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**CS3217 (Modern Platforms)** – intensive software engineering on the iPad offered to only 27 students

- 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

**CS3216 (Evolving Platforms)** - web and cloud application development offered to only 40 students

- Kontitude : HTML5 Application to organize conferences
- Status Time Capsule : Facebook Application to give a ranking of user status messages
- MysteryStory : HTML5 Game to provide innocuous learning about AED machines

**CS2103 (Software Engineering):** Lead a team of 4 to develop - [QuickToDo](#) Task Manager in Java

- Project inducted into the [Hall of Fame](#) for the course
- Supported natural language input, automated 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

## Assignment Work

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- 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 - Using Weka to apply Machine Learning algorithms to various problems
- Networking - Simple reliable file transfer protocol over UDP

## Project Papers

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|---|------|
| ○ 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 |

## Tech Skills

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- 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

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### Competitions.....

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

### Academic.....

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

### Service.....

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|--|---------|
| ○ 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

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### National University of Singapore.....

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| ○ Resident Assistant | 2010-2011 |
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### St. James' School.....

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| ○ School Captain and President of Student's Council | 2009-2010 |
| ○ Troop Leader of Boy Scouts Association            | 2008-2010 |
| ○ Nature Club President                             | 2009-2010 |