# **BOBBY RANJAN**

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#### Education

## **Nanyang Technological University**

B.Eng. in Computer Engineering
Minor in Entrepreneurship & Life Sciences
CGPA - 4.59/5.00 | Ex. Graduation - June 2018

#### **Vikhe Patil Memorial School**

Grade 12 | CBSE Board Examinations (Alevel equivalent) | Science Stream School Topper with 96.8% | May 2014

#### Skills

### **Programming Languages:**

Java • Python • C • C++ • C#

# Web Development:

HTML5 + CSS3 • JavaScript • jQuery • Bootstrap • PHP • JSP • Django • AngularJS

• Node.js • MongoDB • ActiveMQ

#### Other Software Skills:

Git • Heroku • SQL • Android • Firebase •

Spring • Gradle • JUnit • Roslyn

#### **Hardware Skills:**

Circuit Design • XPPAUT • MATLAB • Arduino • ARM Cortex M4 • Raspberry Pi

## Co-Curricular Activities

IEEE NTU Student Branch | Vice President
NTU Sikh Society | Publicity Director
NTU Model United Nations | Media
NTU Students' Union | Events Director

## **Selected Courses**

Discrete Mathematics

Algorithms

**Data Structures** 

**Operating Systems** 

Introduction to Databases

Digital Systems Design

Software Engineering

Sensors, Interfacing & Control Systems

Microcontroller Programming

**Computer Networks** 

Principles of Genetics

Entrepreneurship for New Ventures

Introduction to Forensic Science (Coursera)

Computational Neuroscience (Coursera)

Chinese Language Level 1

## Interests

Life Sciences • Hackathons • FIFA • Football (Soccer) • Table Tennis • Singing

### **Fun Facts**

- ✓ Invited to UC Berkeley in June 2013 for National Student Leadership Conference (NSLC)
- ✓ Possesses DELF A2 diploma in French from Ministry of Education, France
- ✓ Performed in a university-wide dance concert in front of over 300 people

## Experience

# Software Design Engineer Intern | BitTitan

May 2017 – August 2017 | Singapore

- Built customer-facing license consumption report for all BitTitan products
- Conducted tech feasibility analysis to improve BitTitan's reporting capacity
- Built code analysis tool to clean up database references across codebase
- Tech stack includes C#, SQL and Microsoft Roslyn

## Technology Analyst Intern | Bank of America, Merrill Lynch

August 2016 - December 2016 | Singapore

- Used message queues to improve efficiency of payment processing system
- Built a proof-of-concept (POC) to help onboard new testers onto platform
- Tech stack includes AngularJS, Java Spring, ActiveMQ, MyBatis & SQL

## Summer Intern | Asia Risk Transfer Solutions (ARTS)

May 2016 – July 2016 | Singapore

ARTS is a software and technology solutions startup that aims to help create and manage risk transfer products for developing communities in Asia

- Developed 2 MVP Android applications for different user groups
- Enhanced server-side API of the enterprise web application
- Tech stack includes Java, Android and Django

## President's Research Scholar | Nanyang Technological University

August 2015 – June 2016 | Singapore

**Project Title:** Mathematical modelling of calcium signalling for regulation of neuronal cell death in Alzheimer's Disease

- Used XPPAUT and MATLAB for modelling purposes
- Presented research paper at an international conference (ICUR-URECA 2016)

## **Selected Projects**

#### Protein Interaction Networks | Final Year Project, NTU | April 2017 - Present

- Developed module to build protein networks from reference databases
- Developed technique to extract dense networks as protein complexes
- Built Cytoscape module using Java; used Python for network analysis

## CommandPlus | NUS Hack & Roll 2017 | January 2017

- CommandPlus is a Chrome extension that provides hand gesture-based control of one's browser.
- Won People's Choice Award at NUS Hack & Roll 2017
- Built using OpenCV, WebSockets and JavaScript

## CodeBot | Facebook Singapore Hackathon 2016 | September 2016

- CodeBot is interactive chatbot that helps beginners learn how to code with witty replies, GIFs and human-readable errors
- Tech stack includes MongoDB, api.ai, Node.js, HTML, CSS & JavaScript

WhyBills | Facebook Singapore Hackathon 2015 | February 2015

- A system designed to eliminate printed bills at any point of sale (POS)
- Retailers can encode their bill, generate a QR Code on the POS System and display this QR Code to the customer as a receipt
- Tech stack includes XML, Java (Android) & SQLite

### When We Meet Again | NUS Hack & Roll 2015 | January 2015

- When We Meet Again is an Android application that uses the relative distance between users, determined using the phone's Bluetooth, to trigger a reminder/push notification
- Won Best Freshmen/Non-Tertiary Award at NUS Hack & Roll 2015.
- Tech stack includes XML, Java (Android) & SQLite

# Achievements & Awards

People's Choice Award | NUS Hack & Roll 2017 | January 2017

Best Freshmen Award | NUS Hack & Roll 2015 | January 2015

All India Rank 1820 | IIT JEE Advanced (India) | May 2014

All India Rank 3 scoring 98.2% | ICSE Board (O-level equivalent) | May 2012