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# MUDIT GUPTA





github.com/mg14777

### **EXPERIENCE**

#### J.P. Morgan

#### Summer 2017

## Technology Summer Analyst London, UK

- Front end development using AngularJS to rebuild UI of an internal application
- Connected the Angular front end to Python back end via a REST API
- Patched existing Java codebase and reduced vulnerability score by 87% through input validation
- Wrote scripts for UI testing using Selenium and unit testing in Python

#### GameBench

#### Summer 2016

#### Software Engineering Intern Bristol, UK

- Upgraded existing Java application allowing users to analyse network usage of Android and iOS apps
- Used Application Resource Optimiser (ARO) by AT&T to fetch network usage parameters like latency, response time, download duration and size etc.
- Attempted a Man-in-the-Middle attack to decipher encrypted HTTPS traffic for analysis purposes

#### **Spookfish Innovations**

#### Summer 2015

## Software Development Intern Bangalore, India

- Developed a C++ application for real time person detection in live video using Histogram of Oriented Gradients
- Worked on Support Vector Machines (SVM) for classification of feature sets
- Developed a C++ application for high precision measurement of industrial components using Object Coordinate tracking Lens Formula and RANSAC algorithm

### **PROJECTS**

### Meeting Room Booking System

- Web application to book office meeting rooms via Google Calendar
- Worked on the front using HTML, CSS and Javascript along with use of Google Calendar API

#### Scotland Yard Remote Al

- Networked Java version of classic board game "Scotland Yard"
- Developed an Al by implementing Floyd Warshall, MiniMax and Alpha-Beta pruning algorithms
- Multi-Threading and precise mathematical rating functions improved performance by 20%

#### Fast Tube

- Java Application that allows people to smoothly use London underground by efficiently planning their journey
- Used Dijkstra's algorithm to find shortest route to destination
- App maps the shortest route & calculates total distance & time taken for user's journey

## **EDUCATION**

#### University of Bristol, UK 2014-2018

Master of Engineering (M.Eng.) Computer Science (First Class)

## National University of Singapore

2016-2017

Exchange program

Computer Science (GPA: 4.6/5.0)

## >\_ SKILLS

#### Programming:

Java • C++ • C • Python • Haskell • SQL

#### Web & App Development:

AngularJS • HTML • CSS • JavaScript • Node.js • PHP • jQuery • Bootstrap

#### Tools:

Git • MatLab • Eclipse • MS Visual Studio • Android Studio • Adobe Illustrator • LATEX

### **SELECTED COURSEWORK**

Data Structures & Algorithms
Software Engineering
Operating Systems
Computer Networks
Databases
Human Computer Interaction
Machine Learning
Artificial Intelligence
Computer Graphics

#### **AWARDS & OTHER EXPERIENCE**

#### Dean's International Intern Scholarship

 Awarded to 10 students by Bristol university for excellent performance in summer internship

#### Teaching Assistant

#### 2015-16

- Assisted students in weekly problem classes for an introductory math module
- Managed a class of 128 students