

## **GURPREET SINGH**

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## **EDUCATION**

**Master of Computer Science.** (GPA: 3.90/4.0)

*September 2017 – December 2018*

University of Ottawa

**Bachelor of Technology in Computer Science & Engineering.** (GPA: 7.40/10.0)

*July 2010 – June 2014*

National Institute of Technology (NIT) Jalandhar, India

## **PROFESSIONAL EXPERIENCE**

**Morgan Stanley – Technology Analyst Intern**

*May – August, 2018*

- Developed a web tool to search and extract the data from the files, messages and other Exchange data sources involved in the post trade processing. The data sent by the exchange is hard to access or is in unreadable format so we used regex search on multiple file formats.
- Layout of each file or message was linked to its format and brainstormed for multiple other features using ML.
- Used angular 5, ag-grid, CodeMirror, MSJava AutoConf, train build in the technology stack to develop the tool.
- Took ownership of the project and developed it from scratch.

**University of Ottawa – Teaching Assistant**

*September 2017 – April, 2018*

- TA for the course ITI 1120 Introduction to Computing in Python and ITI 1121 Introduction to Computing II.
- Conducted labs and helped students in solving the algorithmic problems in Python and Java.
- Proctored the quiz, midterm, final exam and corrected the assignments.

**British Telecommunications plc. – Software Engineer**

*November 2016 – July 2017*

- Worked on the Auto Routing Engine of BT which supported addition of inventory items in the graph database by parsing the inventory excel file and used gremlin to query the database.
- Worked on the architecture of the inventory management of BT to update the part of old data model to NoSQL data model for better performance and maintenance.

**Samsung Research India, Bangalore – Senior Software Engineer**

*March 2016 – November 2016*

- Worked in S Health – Fitness based Android Application from Samsung.
- Worked to optimize the power consumption of Pedometer in S Health which involves estimation based steps counting by recognizing the phases involved in walking instead of continuously running the step detection algorithm on the accelerometer data coming from mobile sensors which consumes a lot of mobile battery.
- Designed and implemented the Strava Module being part of the Service interoperation team of S Health. It helped in mutual syncing of all the Strava and S Health fitness data.

**Samsung Research India, Bangalore – Software Engineer**

*June 2014 – February 2016*

- Member of Sensor Team which assists the S Health Application in communicating with the external medical devices like Heart Rate Monitor, Blood Pressure device, Bluetooth enabled Weighing Scale etc. at the Sensor level.
- Member of Wearable team which assists the Wearable devices (Gear, Gear 2, Gear S, Gear S2) in communicating with the S Health Application. The communication involves syncing of the data between the mobile device and the wearable.
- Contributed in restructuring the architecture of the module in Gear Manager using the basic design patterns and java concepts (oops, collections, Multithreading, etc.)
- Worked on Flagship Gear device of Samsung in SAMSUNG HQ (Suwon, South Korea) for 6 months. Designed and implemented from scratch Data base Comparison Tool using Java
- Worked on a POC (Concentration measuring while playing dart game) and formulated an algorithm to manipulate the accelerometer and gyroscope data from the Samsung Android Gear resulting in generating useful information for the user to improve the concentration while playing dart game.

**Aranya Consulting, New Delhi – Software Engineering Intern**

*May 2013 – July 2013*

- Secure Group Communication
- Created an Email Messenger which allows to send messages in a Group of members
- Provided security to the process using Digital Signature scheme and DES Algorithm.

- Online Scarves Trading Website

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**PROJECTS****Fake News Detection***May 2018 – December 2018*

- Working on the detection of the fake news using ML and DL.

**Named Entity Recognizer (NLP)***September 2017 – December 2017*

- Compared the performance of different Named Entity Recognizers on Social Media text and Newspaper text. Used OpenNLP and CoreNLP tools on ACE and Twitter datasets.

**Music Store Web Application***September 2017 – December 2017*

- Developed an ecommerce music store web application which supported purchasing music cds and the payment gateway as well. It was developed in a team of 4 members using html, JavaScript, Jsp and java using MVC pattern and SOAP web service.

**Final Year Project, NIT Jalandhar***October 2013 – April 2014*

- Search Engine Optimization - The idea was to make a search engine and optimize it (both time efficient and more result oriented) and then connect the search engine to the server of the college where all the data of college is kept in multiple formats like Pdf, Doc etc.

**Other Side Projects***August 2012 – April 2014*

- Blood Bank Web Application, Pong game using Python, Sudoku (Android application), Hospital Management System.

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**PAPERS PRESENTED**

- An intelligent session transition system towards low power walking step estimation – FTC IEEE Conference, Vancouver, Canada *November 2017*
- A musical guidance system for ergogenic benefits in workouts - FTC IEEE Conference, Vancouver, Canada. It demonstrated the mechanism to boost the performance of the user while doing workout. *November 2017*
- Concentration Index in Dart Game - Samsung Research India, Bangalore. The paper reached the final stage of review committee in Samsung HQ (South Korea). *May 2015*

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**COMPUTER SKILLS**

- Languages: Java, C, C++, Python, SQL
- Web Technologies: Angular 5, HTML, CSS, XML, JavaScript, ASP.NET, Spring, Hibernate
- Tools/Platforms: Android, Eclipse, Visual Studio, Tensor Flow, Git, SVN, Perforce, JIRA, Microsoft Office, NetBeans, Statistica, NS2, Rational Software Architecture, Orient Db, Octave, SoapUI, WebLogic, Textpad, Mobaxterm.
- Database: Microsoft SQL 2008, Oracle 10g, OrientDB
- Android Development
- Strong in Data Structures and Algorithms and problems solving.

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**LEADERSHIP & ACTIVITIES**

- Member of Sama Foundation, an NGO BT has collaborated with which aims to provide education to poor children.
- Have taught basic computer and spoken English courses to the children with physical disabilities.
- Organizing Head of OPENGEEEST, a society of Computer Science department during National level Undergrad TechFest.
- Head of 'ALGORYTHM' - organized this national level algorithm-design contest during undergrad TechFest.
- Secured Rank in 1% category of students amongst 1.2 million appeared in AIEEE – 2010.
- Performed Bhangra multiple times in the cultural festivals of college and office.

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**LinkedIn and Other Profiles:-**

- **LinkedIn** - <https://www.linkedin.com/in/gurpreetsingh-uottawa/>
- **GitHub** - <https://github.com/gurpreetsingh91>
- **LeetCode** - <https://leetcode.com/gurpreetsingh91/>
- **HackerRank** - <https://www.hackerrank.com/GurpreetSingh91>