PARTH SETHI

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Education

Master of Science — **University of Florida, Gainesville, FL** — **Aug 2017 – Dec 2018**

- **Major**: Computer Science. GPA: 3.56/ 4
- **Coursework**: Advanced Data Structures, Programming Language Principles, Analysis of Algorithms, Database Management Systems, Computer Networks, Computer Architecture
- Gator VR Club; Academic Achiever Award - 2017

Bachelor of Technology — **Jaypee University of Information & Technology, Solan, India** — **Aug 2013 – May 2017**

- **Major**: Electronics and Communication. GPA: 9.1/ 10
- **Coursework**: Object oriented programming, Operating Systems, Project Management, Telecommunication Networks.

Experience

Software Engineer — **OM Partners, Atlanta, GA** — **Feb 2019 – Present**

- Integrating additional functionalities towards the "OMP Plus" product to improve different functionalities of their framework for Supply chain management software.
- Implementing optimization strategies using C++14 to improve "OPAL" which is a customized language to implement supply chain inventory management and logistics.
- Leveraged knowledge: C++14, Testsuite, SVN, OPAL(custom grown compiler)

Teacher's Assistant — **University of Florida, Gainesville, FL** — **Aug 2018 – Dec 2018**

- Served as a teacher's assistant for a course Database Management Systems for a class of 30 students.
- Helped students develop projects using oracle database as their semester long projects.
- Leveraged knowledge: SQL, Oracle

Software Intern — **Texas Instruments NSIT, Delhi, India** — **May 2015 – July 2015**

- Developed an algorithm in C to show animations over oscilloscope to create a working television with help of digital signal controller.
- Utilized I2C protocol to establish connection between controller and the oscilloscope for x & y axes to produce animations.
- Leveraged knowledge: C, Digital Signal Processing, C2000 controller

Software Intern — **NIIT, India** — **May 2014 – July 2014**

- Developed an auction related sale and an e-bank system interfaces in Java using SQL databases for user accounts and trading information in Java.
- Leveraged knowledge: Java, SQL

Publications

"Alternate ethos of intelligence: humanoid robot – "ENQUETE" — **SPIN conference 2017**

- Developed a handheld controlled robot that mimics human gait, collecting surrounding data with help of various sensors.

"Sign Language Analysis and Recognition to Aid Specially Abled Communicators" — **IEEE conference INDIACom 2017**

- Designed and published a research paper on a glove that translates American sign language to English verbal speech.

"Safe Sole Distress Alarm System for female security Using IoT" — **Springer 2017**

- Developed a shoe sole that sends SoS signals when tapped hard on ground multiple times with various safety features such as alarm and a shoe taser.

Skills

Software: [proficient] Java, C++, SQL, Visual Studio [familiar] HTML, CSS, JavaScript, Git

Projects

Personal Website: https://sethiparth.github.io/ (for additional information and projects)

JAVA based Compiler Design — **Java, ASM, JVM Bytecode, Junit** — **Jan 2018 – May 2018**

- Implemented a scanner using a top-down parser based on custom grammar to implement a strongly-typed programming language, using visitor pattern for type checking.

P2P File Sharing Software — **Java** — **Jan 2018 – May 2018**

- Implemented a P2P file sharing system similar to BitTorrent for file management operations between peers.
- Improved download speed across different computers by 50 % by using special message types for choking and unchoking.

Gator Zone — **SQL, Database** — **Jan 2018 – May 2018**

- Designed a website for e-shopping with features for suggestions and trending new products using graphs and pi charts in the market. Used oracle service for back end SQL database.

MIPS simulator – Tomasulo algorithm — **C++** — **Aug 2017 – Dec 2017**

- Implemented Tomasulo's algorithm to schedule and execute MIPS commands in out of order execution fashion using multithreading and file handling in java.

Data compression algorithm — **C++** — **Jan 2017 – May 2017**

- Implemented Huffman encoding technique to compress a binary file and used a cache optimized 4-way min heap for decoding the given file efficiently by 80%.