**Mithun Nagesh**

81 Montrose Ave, Buffalo, New York 14214 | (716) 319-3067 | **mithunna@buffalo.edu**

**EDUCATION**

**Master of Science**, Computer Science, [GPA: 3.4] (Jan 2016)

**University at Buffalo, State University of New York**, Buffalo, NY

Courses: Analysis of Algorithms, Modern Networking Concepts, Computer Security, Fundamental of Programming Languages, Machine Learning, Distributed Systems, Database Systems, Computer Architecture.

**Bachelor of Technology**, Computer Science and Engineering, [GPA: 7.4 /10] (May 2009)

University of Kerala, TKM Engineering College, Kollam (KL), India

**TECHNICAL SKILLS**

* **Languages:** Java, SQL, C, Python, Bash
* **Web & Other Technologies:** JavaScript, HTML, CSS, JSP, AJAX, JSON, XML, TCP/IP, ASP
* **Database Technologies & Frameworks:** Oracle, SQL Server, MySQL, Apache Tomcat
* **Tools & Operating Systems:** Eclipse, Wireshark, Git, Adobe CQ-5, Aldon LME, Linux

**WORK EXPERIENCE**

**Graduate Assistant at** **University at Buffalo**, State University of New York (March - Present)

* Developed a hybrid version control system called “GitCvs” which enhanced the Concurrent Versions System (CVS) to be more update-aware like GIT and overcame the scalability issue of GIT.
* Provided a context menu handler (COM objects) for “GitCvs” commands in Windows. **[Python, C++, SQL]**

**Technology Analyst** at **Infosys Ltd.**, Mangalore,(KA) India. (2009 - 2014)

* Developed an online book shopping portal which consisted of Admin, Staff and Customer modules. The portal provided uses like searching books, placing orders and providing online invoice and bill. **[Java(Servlets), JavaScript, SQL]**

**ACADEMIC PROJECTS [**GitHub - **https://github.com/DI-3**]

**Implemented Amazon Dynamo** (Distributed Systems)

* Implementing 'Asynchronous Gossip and Push Sum Algorithm' which is used for group communication and aggregate computation using “Akka Actor Model”.
* Testing the convergence time for different topologies like full network, line and 2D Grid with different sizes. **[Scala]**

**Implemented Distance Vector Routing for Servers** (Modern Networking Concepts)

* Developed an application for Network Layer Routers to communicate with each other, and create respective forwarding tables with optimal cost.
* The application simulated network crash, updated network cost between neighboring servers, displayed network routers’ forwarding table etc. **[C]**

**Simulation of TCP Protocols** (Modern Networking Concepts)

* Simulated the Selective Repeat, Go-back-N (sliding window) and Alternate Bit TCP protocols.
* Performed tests over servers by sending packets and observed the throughput results. **[C]**

**Peer-to-Peer file transfer** (Cyber Physical Systems)

* Developed a peer to peer file transfer application using TCP sockets in C.
* Created a hybrid network system consisting of a control server and 4 peer nodes. **[C]**

**Minimum Spanning Tree (MST) using Prim’s Algorithm** (Advanced Data Structures)

* Using Adjacency List representation of graphs, obtained MST by arrays (simple scheme) and Fibonacci heap (f-heap scheme) by implementing Prim’s Algorithm for randomly generated undirected graphs.
* Relative analysis between the two schemes was done on basis of execution time for different edge densities and vertices. **[Java]**

**Semaphore Implementation for Dining Philosopher’s Problem** (Operating Systems)

* Implemented the structure of binary semaphores and added four (create, up, down, close) new system calls to Minix 3 O.S.
* Solved the Philosopher’s problem by achieving mutual exclusion among contending processes through use of semaphores. **[C]**