MADHUR GUPTA

: https://goo.gl/XCQWaf :http://goo.gl/WDFSHJ : madhurgu@buffalo.edu : (716)-650-8951

EDUCATION

Master of Science, Computer Science *Dec 2015*
University at Buffalo, State University of New York **GPA-3.50**
Bachelor of Technology, Computer Science & Engineering *June-2009*
National Institute of Technology, Calicut, India

COURSEWORK

Distributed Systems, Operating Systems, Parallel and Distributed Processing, Machine Learning, Computer Networks, Computer Security.

TECHNICAL SKILLS

Programming Languages: Core Java, JSP & Servlets, J2EE, Java Web Services, Python, C, C ++, R, HTML, JAVA Script, JQuery, Bash.
Tools & Frameworks: Git, JUnit, IBM Rational Team Concert, MS SQL, MySQL, Selenium, IBM CQ, Spring, Hibernate, Node.js, Angular.js.
Big Data and Parallel Processing Technologies: Apache Hadoop, Apache Spark, NVIDIA CUDA.
Integrated Development Environment: Eclipse, NetBeans, Microsoft Visual Studio, R Studio, Android Studio, GNU Debugger.
Networking Protocols: HTTP, DHCP, DNS, FTP, TFTP, SNMP,Telnet,TCP/IP, RIPv1, RIPv2, IGRP, OSPF, ICMP, BGP, Spanning Tree Protocol.

PROFESSIONAL EXPERIENCE

CA Technologies, Hyderabad, India
Software Engineer *Aug 2011 - July 2014*
Associate Software Engineer *June 2009 - July 2011*
CA Spectrum Infrastructure Manager (C++, Java, JSP, RESTful Web Services, SOAP, Agile Methodology)

- Worked directly with Product Management to gather new feature requirements.
- Designed, estimated and implemented new product features.
- Interacted with QA teams and Performed sustaining of the product, addressed and resolved customer issues.
- Automated Unit test cases and system test cases which resulted in reduced manual testing effort.

ACADEMIC PROJECTS

Big Data and Machine Learning: Comparing the Performance of ML Frameworks (Spark, MapReduce, GraphLab) *Fall-2015*

- Analyzed Bayesian inference's performance on ML frameworks of Apache Spark, MapReduce, GraphLab on a large data set of Buffalo 311 Call and Resolution Center.

Operating Systems: OS161 Operating System Development (C) *Spring-2015*

- Developed synchronization primitives, support for File and Process system calls, Virtual memory management system.
- Solved Whale Mating and Traffic Light intersection problems using above synchronization primitives.

Distributed Systems: Amazon Dynamo Style Key-Value Storage (Java, Android) *Spring-2015*

- Developed a simplified version of Amazon Dynamo which covers ID space partitioning/re-partitioning, Ring based routing, Node joins, Quorum based replication, recovery from replicated storage after failure.
- The main goal is to provide both availability and linearizability at the same time. In other words, it should always perform read and write operations successfully even under failures, a read operation should always return the most recent value

Machine Learning: Handwritten Digit Classification (Python, NumPy, SciPy) *Spring-2015*

- Implemented Multi-Layer Perceptron Neural Network and Back Propagation algorithm for classification of given MNSIT dataset where pixels of the image are considered as features to the model.

Modern Networking Concepts: Remote File Sharing System (C, UNIX Socket API, iPerf) *Fall-2014*

- Developed a hybrid of client-server and peer-to-peer architecture for distributed Remote File sharing using Unix Socket Programming in C++.
- Performed network analysis of the system on download rates, upload rates and compared it with iPerf.

Modern Networking Concepts: Distributed Distance Vector Routing Protocol (C++, UNIX Socket API) *Fall-2014*

- Implemented Distance Vector Algorithm (Bellman-Ford) in a distributed scenario where physical hosts acted as routers and they shared their routing information with their neighbor hosts.
- Implemented various commands to accommodate various topology changes to simulate real network scenarios.

PERSONAL PROJECTS

Interactive Programming in (Python) *Summer-2015*

- Implemented various arcade games like Rice Rocks, Pong, Black Jack, Memory.
- Used GUI programming in Python for the development of these games.

Data Science using R (R, R Mark Down, R Studio, Slidify, RPubs, ShinyApps) *Summer-2015*

- Performed data extraction, regression analysis, statistical Inference and machine learning algorithms on various data sets using R.
- Presented the data and results using Slidify, RPubs and ShinyApps.