1050 S.Stanley Place, Apt: P-134,
Tempe, AZ- 85281

AARAV MADAN
https://www.linkedin.com/in/aaravmadan

aarav.madan@asu.edu
+1-480-616-6252

SUMMARY

Graduate student at Arizona State University pursuing Master's in Computer Science with Big Data Systems concentration. Strong affinity towards programming, software design and development as well as Big Data, artificial intelligence, machine learning and databases. Impelled towards handling data-intensive applications. Industrial experience of software development using Scrum framework.

EDUCATION

Master of Science, Computer Science, Arizona State University, USA **Fall 2017**

- Relevant Coursework: Semantic Web Mining, Distributed Database Systems, Distributed and Multiprocessor Operating Systems
- Enrollment for summer 2016: Data Mining, Statistical Machine Learning, Database Management System Implementation

Bachelor of Technology, Computer Engineering, Sardar Vallabhbhai National Institute of Technology, India **May 2015**

- Relevant Coursework: Software Engineering, Data Structures, Algorithm Analysis and Design, Object Oriented Technology, Distributed Systems, Knowledge Based Management Systems, Artificial Intelligence. **CGPA: 9.48/10**

TECHNICAL SKILLS

Languages: C, C++, C#, Java, Python, SQL, MySQL, PL/SQL, Bash & Bourne shell, Prolog
Platforms: Windows, Linux, UNIX, Raspbian
Certifications: Java Programming Language using Java SE6, Innovation and Entrepreneurship
Tools: Microsoft Visual Studio, Microsoft Suite, Sci-kit, Eclipse, Weka, PostgreSQL, phpMyAdmin
Big Data tools: Hadoop, MapReduce, HDFS, Hadoop streaming, Spark, RDDs
TCP/IP tools: Scapy, Wireshark, Snort, iptables

PROFESSIONAL EXPERIENCE

Intern, General Electric India, Mumbai **May 2014 – July 2014**

- Collected data samples and corrected their timestamp values to incorporate daylight saving time correction in GE's asset management software (Sytem1) and wind farm management software (Wind) to provide consistent representation of timestamped data.
- Adhered to the Scrum framework and Su-Ha-Ri approach to adapt to changing requirements of the software development process.
- Worked as an Alpha-tester to perform unit tests and fix Code-Analysis issues in GE's blade health monitoring system (Blade) and reported unfixed ones to Quality Assurance team. Completed the Sprint backlogs by effective collaborations during daily Scrums.
- Gathered experience in software development using C# along with hands-on with native and managed code on MS - Visual Studio.

Research Intern, Indian Institute of Technology, Bombay **May 2013 – July 2013**

- Customized and cross-compiled the Raspbian kernel of Raspberry-Pi on Linux to create a lightweight Real Time Operating System by eliminating unnecessary modules to expedite the task of timestamping electrical signals.
- Configured the systems to accept signals serially using GPIO pins, time-stamped them using time signatures by means of an NTP client and forwarded them to Wide Area Measurement Systems for real-time frequency analysis.
- Verified improved latencies by performing cyclic-test on the system.
- Understood the modularity of Linux kernel and employed that skill to develop an effective firmware for pre-processing of signals.

ACADEMIC PROJECTS

Identifying Role of Persuasion in Social Media - **Semantic Web Mining, ASU** **August 2015-present**

- Identified user and text features whose occurrence in a tweet on Twitter enhances the chances of it being retweeted.
- Modeled a prediction system using logistic regression, Support Vector Machine & ensemble learning techniques like Random Forest.
- Attempted to incorporate non - parametric approach for tweet-score calculation using Theil-Sen baseline.

Geospatial Operations using Apache Spark (Ongoing) - **Distributed Database Systems, ASU** **August 2015-present**

- Extended a standalone implementation of Apache Spark over HDFS to handle geo-spatial queries.
- Performed in-memory transformation and actions on Resilient Distributed Datasets using JTS topology suite for spatial operations.
- Implemented a tweet heat map application using these geo-spatial queries.

Blog Summarization and Sentiment Analysis using Hadoop **July 2014 – May 2015**

- Led a team of 4 members on setting up a 4-node Hadoop cluster with dependencies set for Natural Language Toolkit library.
- Implemented a sentiment analysis in python & ported it as a Hadoop job to create summaries of blogs fed in using Hadoop-streaming.
- Created summary by classifying sentences based on their polarity using static dictionaries for bi-gram testing of features in sentences.

Artificial Intelligence Game - Knowledge based Management Systems, SVNIT **November 2014**

- Designed and developed a maze game in C++ exhibiting Artificial Intelligence using Minimax algorithm and Manhattan Distance.

Online Media Rental Application - Database Management Systems, SVNIT **October 2013**

- Developed an online media rental application using MySQL database at the back-end and Java for front-end development.
- The database was designed by normalizing the tables up to Third Normal Form and the queries were interfaced using phpMyAdmin.

Android App Development – Association of Computing Machinery (ACM), SVNIT **September 2012**

- Developed an android app which acted as a virtual class representative by circulating schedule changes to students and professors.
- Client – server connectivity was leveraged by using XAMPP which helped connect to the data stored in MySQL database.

LEADERSHIP ROLES

- Hosted workshops and webinars as a Microsoft Student Associate for SVNIT. **July 2014 – May 2015**
- Led the documentation team and organized city levels evets as member of Google Developers Group, SVNIT. **July 2014 – May 2015**
- Led a team of three members to the Asia Regionals of ACM – ICPC at IIT – Kharagpur **December 2013**