Umang Desai

(703) 980-3493 | umangd03@gmail.com | www.umangdesai.com

Summary

Hands on, versatile engineer with an eye for simplicity and elegance in the software I write; looking for full time opportunities. I recently achieved my Master's in Computer Science before which I was a software engineer for 4 years, working out of Silicon Valley.

Education

M.S Computer Science   2016-2018
George Mason University   GPA: 3.4

B.S Information Science and Technology   2008-2012
Pennsylvania State University   GPA: 3.0

Coursework: Operating Systems, Distributed Systems, Analysis of Algorithms, Advanced Database Systems, Software Testing, Program Design and Data Structures, Component Based Software Development, Software Modeling and Architecture, Mathematical Foundations of Computer Science.

Skills

Languages: JAVA, C++, C, Python
Frameworks/Environments: Junit4.0, JSF, Apache Camel, XStream, log4j, AWS
Operating Systems: Linux, Windows, OSX
Database Systems & Servers: MS-SQL, MySQL, SQLite, TOMCAT, Windows ISS
IDEs & Version Control: Eclipse, Netbeans, PyCharm, GIT, SVN

Work Experience

George Mason Univ. Department of Computer Science   Aug 2017 - Current
Graduate Teaching Assistant (Software Engineering)
- *Conducting lectures and presentations.*
- *Grading* deliverables for a full scale SDLC project, assignments, presentation peer evaluations.
- *Mentoring* students on different stages of SDLC and conducting bi-weekly meetings for project review, enabling AGILE culture.

Matreya.IO   Jun 2017 – Jul 2017
Blockchain Developer
- Develop and review high level design for the Blockchain. Also, find possible implementation solutions for Proof of Space(PoS).
- Optimize Proof of Work algorithm for x86.
- Modify difficulty adjustment algorithm to DigiByte v3.0.
- Designed and tested unit tests for DAA and PoW algorithms.

George Mason Univ. Department of Computer Science   Jan 2017 – May 2017
Graduate Teaching Assistant (Object Oriented Programming)
- *Mentoring* undergraduates through office hours, teaching students of varying level of understanding the *concepts of Java Object Oriented Programming.*
- *Conducting lectures* and *programming labs.*
- *Grading* assignments, labs, projects.

Fondo   Jan 2015 – Mar 2016
Co-Founder
- *Social event discovery application to correlate user and events geospatial data* and indicate suitable local events for a user.
- Designing and developing backend, databases and data-models.
- Maintain, monitor and *review development* of the application and *manage project deadlines*.
- Actively involved in *software architecture and product development*.

ESQ Business Services   Aug 2012 - Dec 2014
Software Engineer
- Designed, developed and tested module to *monitor JVM* on a host by *extracting telemetry data* using *JAVA*, *MSSQL* and *JMX*. This was achieved via a 3 tier *client-server-data backend architecture*.
- Designed and modeled a database for the data extracted. Then *developed advanced filtering* across *multiple Mbeans* for retrieving these metrics for *bandwidth friendly data pipelines*.
- Configured frameworks like *XStream* for configuration files and models, *log4j* for logging.
- Designed, developed and tested module to *monitor Linux via the proc fs to analyze system performance and uptime.* This was achieved with *JAVA and MSSQL*
- Developed a *parsing framework for system proc files* with *configurable polling mechanisms*.

Personal Projects
These and more projects can be found at github (handle: umang-desai*)*
Content Addressable Network.
- Built a *scalable distributed hash table network*. The idea is to help manage a large hash table over internet like scalability. This can also support distributed data storage. Used: Java, JMX

Operating System
- Operating systems fundamental development. Implemented OS concepts like *synchronization primitives, process creation, multi-processing, virtual memory*. Used: C, gcc, vi

Two-Phase Commit Transaction System
- A *distributed durable* key/value store which supports *two-phase commit protocol*. It supports recovery and is *scalable* in that it supports multiple clients being able to connect to the master and issue a stream of get/put/del requests. Used: Java, RMI, SQLite

NFL Fantasy League Software Model & Architecture
- Gathered *requirements* and built *use cases*. Designed *static/dynamic class structures, sequence diagrams, state machines.* Used: Magic Draw, UML