

## SYSTEM ANALYST/COMPUTER PROGRAMMER

### Summary

- 2 years experience as System Analyst supporting production applications.
- 2 year experience as Software Engineer developing ERP application.
- Master's Thesis in Data Visualization and Information Visualization using C++, Qt and VTK.

### Highlights

- Prog. Languages C, C++, PL/SQL, Matlab, Python, MPI programming
- Open Source Libraries OpenGL, VTK, QT, OpenMP
- Operating Systems Windows, Unix, Mac OS X
- Database Systems Oracle 9i, MySQL
- Web Technologies HTML, XML
- Tools Autodesk Maya, Adobe Photoshop, Toad, Visio 2007, R
- Testing Tools IBM Rational ClearQuest.
- Version Control IBM Rational ClearCase V7.1 , Tortoise SVN, GIT

### Experience

#### System Analyst/Computer Programmer

December 2013 to Current University Of Massachusetts Medical School i¼ Taunton , MA

- Maintain and Support the manufacturing and embedded system applications including software, servers and networks.
- Design and Develop software applications for measuring instruments and embedded systems(C# and JAVA).
- Coordinate work plans between the project manager and client using MS Project.
- Validate technical designs created by IT developers against functional specifications.
- Responsible for maintaining and updating technical documentation for software and systems.

#### Research Assistant

May 2011 to December 2012 Intuitive i¼ Buffalo , NY

- Develop and maintain the inventory of TxCef using MSAccess and C++.
- Provide support for the testing of the emission control system for renewable or alternate fuels.

#### QA Test Engineer

May 2009 to July 2010 Alarm.Com i¼ Redwood City

- Planned test methodology for different phases of test (AT, IT and UAT).
- Designed test scenarios, cases and scripts over different phases of test.
- Prepared users for UAT, by helping them with test scripts and methods.
- Prioritized defects and issues in application, through daily interaction with clients.

#### Software Engineer

December 2008 to May 2009 Accenture Services Public Ltd i¼ City

- Order Entry system development for Gerdau Ameristeel Implemented Order Entry system in PL/SQL Developed and maintained forms and reports in Oracle 9i.

### Accomplishments

- Master Thesis: Visual Comparison Model for Transportation Connectivity of the Great Britain August 2012 to August 2013 Project: Designed a desktop application to analyze transportation connectivity of Great Britain and compare it with the previous years.
- Analyzed the effects of transportation structure on Population and Job Density for various cities of Great Britain.
- Tools/Libraries: Developed a desktop application with QT as UI, OpenStreetMaps (OSM) as map viewer, VTK for visualization and storing spatio-temporal data.
- QMapControl and QCustomPlot libraries, to draw primitives and represent data.
- Interactive Features: Visualize stops, routes and service(bus, train, metro..) locations on top of OSM map.
- Provide search queries for users to interact with different aspects of city geography and dynamically see the changes at these locations.
- Visualize accessibility and connectivity strength of a stop from all locations.
- Visualize population and job density of all regions within a city and compare it with its transportation connectivity.
- View time schedule for a particular stop or route, predict any possible time overlaps between services at a stop when delay is introduced.
- Result: Job density of a location is dependent on that locations transportation connectivity, not vice-versa.
- Academic Projects Game Art and Animation (C#, Maya)(August 2012-December 2012) Developed a 3-D action game (RobotHawk) using C# and Microsoft XNA framework.
- Character modeling and Landscape modeling was built using Autodesk Maya.
- Continuous Collision Detection (C++, OpenGL) (January 2012 Â May 2012) Animated collision detection of free falling spheres over objects placed in their trajectory.
- Developed algorithm to calculate point of contact based on boundary box intersection.

- Database System (C++, MySQL) (January 2012 - May 2012) Design and implement a binary-file based relational database management system to parse and execute DDL and DML queries.
- Machine Learning (JAVA, R) (August 2011 - December 2011) Analyze the provided datasets of previous years Horse Racing, apply Machine Learning techniques on datasets and predict the winner of current year.
- Parallel Computation-Parallel K-means algorithm (C, MPI, OpenMP) (August 2011 - December 2011) Implemented a parallel program for the k-means algorithm using C, MPI and OpenMP APIs for a specified number of nodes on a cluster.
- Achieved a speed-up proportional to the number of nodes.
- Computerized Attendance using Finger Print Sensor (Finger Print Sensor, Matlab, Oracle database) (August 2008 - December 2008) Developed a desktop application to recognize the finger prints of students, faculty, and staff, and use it for attendance calculation.
- Course Work Computer Graphics, Computer Animation and Simulation, Algorithm and Data Structure, Operating System, Computer Networks, Software Engineering, Database Systems, Machine Learning, Theory of Computation.

#### Education

Master of Science : Computer Science , Aug, 2013 University of Houston  $\frac{1}{4}$  City , State , USA Computer Science

Bachelor of Technology : Electronics & Communication Engineering , May, 2008 Jaypee Institute of Engineering & Technology  $\frac{1}{4}$  City , State , INDIA Electronics & Communication Engineering

#### Skills

Adobe Photoshop, C, C++, ClearCase, client, clients, Version Control, Database, embedded system, embedded systems, XML, forms, functional, HTML, IBM, inventory, JAVA, Mac OS, Matlab, Maya, C#, MS Project, Windows, MySQL, networks, OpenGL, Operating Systems, Oracle 9, PL/SQL, Order Entry, programming, Python, servers, scripts, Develop software, technical documentation, Toad, Unix, Visio