Bi Wu

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Education

Master of Science in Computer Science, 2012 - 2014
Arizona State University, Tempe, AZ

Bachelor of Engineering in Computer Science and Technology, 2004 - 2009
University of Electronic Science and Technology of China, Chengdu, China

Technical Skills

Programming	C/C++ (10 years), C#/Java, Python, Assembly, STL, MFC, Win32 Programming
Databases	MS SQL Server, MySQL, MS Access
Web Development	ASP.NET, Django, JavaScript, jQuery, Knockout, Ajax, HTML, CSS
Methodologies	Object-Oriented Design, MVC, MVVM
Computer Graphics	OpenGL (5 years), Qt (2 years), D3, DirectX, OSG, GLSL

Work Experience

Software Engineer, PayPal, Scottsdale, AZ   **10. 2014 - Current**
- Developing UI for PayPal Command Center Wall projectors for monitoring various metrics data in real time;
- Monitoring Server/Batch and sending alerts to our customers in a timely fashion when signal detected;
- Developing UI using JavaScript, jQuery, HTML, and Ajax for the monitoring system based on new requirement;
- Managing and visualizing data based on MVC pattern using Django/Python;
- Writing unit tests, functional tests and automation during each two-week sprint;
- Database management and query optimization to improve the efficiency of data pulling and processing.

UI Developer Intern, Intel Cooperation, Chandler, AZ   **7.2013 - 9.2014**
- Designed a highly interactive GUI for efficient supply chain analysis in real-time based on requirements from Intel;
- Processed raw data and generated relational tables in MS SQL Server for updating the front-end GUI;
- Periodically managed and optimized the database as the size of data kept growing larger;
- Implemented the GUI using C++ and Qt based on Object-Oriented Design.

Web Developer Intern, Qualia, Tempe, AZ   **5.2013 - 7.2013**
- Created and modified models for MVVM pattern based on Knockout.js and coding in JavaScript, JQuery and Ajax;
- Developed customer's website based on MVC which involved programming in C#, ASP.NET, and LINQ.

Teaching Assistant, Arizona State University, Tempe, AZ   **12.2012 - 5.2013**
- Assisted Professor Subramaniam Rajan with his course "Developing Software for Engineering Applications" - Fundamentals of engineering software development and Object-Oriented Programming in C++;
- Built GUI-applications using MFC and OpenGL.

Research Assistant, Arizona State University, Tempe, AZ   **12.2013 - 5.2014**
- Designed a dynamic visualization for representing large and flexible hierarchies by modifying traditional icicle plots. The visualization enabled the user to drill down or roll up to review different levels of data in the hierarchy and to change the hierarchy to detect potential patterns.
- Analyzed and designed data structure and algorithms for implementing the visualization;
- Implemented the visualization using C++ and Qt based on the binary tree representation of an n-ary tree.

Academic Projects

3D Visualizer Design and Development, Arizona State University, Tempe, AZ   **12.2012 - 6.2013**
Used C++, OpenGL and MFC to design, develop and optimize a visualizer that generates high quality images for viewing three-dimensional engineering data (e.g. automobiles, aircrafts, biomedical etc.), which can be used for finite element analysis and numerical optimization; Introduced multiprocessing programming OpenMP to improve program's efficiency.

Data Visualization for Colorado Schools Grades   **12.2012 - 5.2013**
Design and Visualization of Colorado schools' performance based on the webpage for analysis and decision making using HTML, JavaScript, jQuery, CSS and GeoJSON.

Design and Implementation of a Ray Tracer for generating Photo-Realistic Images   **9.2012 - 12.2012**
Development of a Ray Tracer for generating photo-realistic images using C++ and OpenGL. Introduced Phong Shading, Soft Shadows, Recursive Reflection and Refraction. The program is capable of reading data of camera, lights, material properties and mesh objects from a XML file to generate the image.

Honors and Certificates

- IBM Certified for On Demand Business Solution Designer V2, 12.2007
- C++ Developer (R2) administered by National Computer Rank Examination of China, 9.2005
- First-Class UESTC Scholarship in 2005-2006 and Third-Class UESTC Scholarship in 2004-2005