

Skills

Languages

Application Programming Interfaces

Tools

Platforms

Database Technology

C++, C# (ASP.NET), Java, Python, ActionScript 2

OpenGL, Qt, XNA, Boost, CGAL

Perforce, SVN, Nant, Visual Studio 2008, Eclipse

Nintendo 3DS, XBOX 360, Windows 7

Oracle 9i, PL/SQL, SQL Server, JDBC

Employment

- **Electronic Arts, NC (USA)** July 2010 – Present
Role: Contract Software Engineer
FIFA (Nintendo 3DS)
Technology: C++, C#, ActionScript2, Nant Scripts, Python
 - Extended rendering primitives to support in-game User Interface elements in depth
 - Collaborated extensively with the UI designer to get Flash/ActionScript screens working in game
 - Modified asset pipeline using Nant scripts to support new game modes
 - Moderated C#/Nant scripts which dealt with compiling all the assets of the game
 - Setup compiler defines to handle different build configurations in sync with all the other dependency packages
 - Worked closely with other team members to ensure project deliverables are completed on-schedule
- **University of North Carolina, Charlotte (USA)** July 2009 – June 2010
Role: Research Assistant
Technology: C++, OpenGL, Qt, CGAL, Boost
 - Developed software for reconstructing terrain-surface using Marching Triangle Algorithm
 - Implemented Delaunay Triangulation constraint
 - Implemented renderer in OpenGL to view the CGAL Polyhedron model
 - Studied computational geometry concepts such as Polyhedron and half-edge data structures
- **3i Infotech, India** Nov 2007 – Feb 2008
Role: Software Engineer
Technology: SQL Server
 - Communicated technical concepts to non-technical managers
 - Interacted, interviewed, and gathered functional user-requirements from client
 - Reviewed System Requirements Specifications
- **Mahindra Satyam, India** Oct 2006 – Apr 2007
Role: Software Engineer
Technology: Java, Oracle 9i, PL/SQL, Informatica ETL
 - Developed prototype application in J2EE technologies for undisclosed automotive sector client
 - Underwent training in advance Database applications using Oracle 9i, PL/SQL, Informatica ETL and ASP.NET (C#)
- **Ministry of Information Technology, Govt. of India** Jan 2006 – Jun 2006
Role: Intern
Technology: Java Swings, JDBC, MVC
 - Simplified decision-making for client by facilitating managers to work at concept or knowledge level
 - Designed software individually using 3-tier architecture of Presentation, Application & Data Layer
 - Implemented design patterns using MVC framework, Data Transfer Object, Data Access Object
 - Implemented validation layer attached to Presentation and DAO Layer
 - Implemented flexible search utility giving user the option to search based on desired fields
 - Developed custom Exception Library to provide useful messages to the client

Independent Projects & Graduate Coursework

- **Kolor (PC)** (In progress) www.p-yank.com
Technology: C++, OpenGL, Qt Framework, Boost, OpenGL Mathematics

- Designed 3D First Person Shooter with a unique game mechanic of claiming enemies by Colouring
 - Developed collada-DAE importer to get 3D models into the game
 - Implemented custom Frame Transformation classes & First-Person Camera
 - Developed Bounding Sphere(s) hierarchy information for the imported DAE model to complement collision detection subsystem
 - Implemented efficient hash-based collision detection/resolution for players and bullets in game world
 - Improved rendering performance using Vertex Buffer Objects
- **Juhuligan (PC)** www.p-yank.com
Technology: C#, XNA
 - Designed a side scrolling 2D-Arcade game inspired by Mario and Contra
 - Focussed the game code to follow object oriented architecture
 - Implemented game State management utilising State design pattern & finite state automata
 - Developed User Interface that used Bezier curves to change player's expression
 - Designed and Developed enemy AI using Finite State Machines
 - **High Dynamic Range Images (Coursework)**
Technology: Matlab
 - Implemented the High Dynamic range algorithm to retrieve the original color response function for a given photographic scene
 - Final image result closely resembles natural scene and lighting conditions as seen with naked eye
 - **Racquet Ball game (Coursework)**
Technology: C++, OpenSceneGraph
 - Simulated experience of a Racquet ball game using the CAVE Virtual Reality technology
 - Player body was tracked with head mounted tracking

Education

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| <ul style="list-style-type: none"> • University of North Carolina, Charlotte(USA)
 MS in Computer Science
 (Graphics and Visualization) | <ul style="list-style-type: none"> • U.P. Technical University, Lucknow(India)
 BS in Computer Science
 (Software Development) |
| GPA: 3.8/4.00
May 2010 | July 2006 |