

Skills

Languages

Application Programming Interfaces

Tools

Platforms

Database Technology

C++, C# (ASP.NET), Java, Python, ActionScript 2, AS3

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

Three year experience in the Software Development Lifecycle processes

• Electronic Arts, NC (USA)

July 2010 – Oct 2010

Role: Software Engineer

FIFA 3DS (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 over point cloud (LIDAR data)
- 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

University of North Carolina, Charlotte(USA)

MS in Computer Science
 (Graphics and Visualization)

May 2010
 GPA: 3.8/4.00

U.P. Technical University, Lucknow(India)

BS in Computer Science
 (Software Development)

July 2006