

## Career Objective

I am driven by the desire to develop games which gives me an opportunity to work with people from varied backgrounds and in-turn learn something new every time, both personally and professionally.

## Game Projects

- **Kolor (PC)** (In progress) [www.p-yank.com](http://www.p-yank.com)
  - 3D First Person Shooter using C++/OpenGL, Qt for UI & OpenGL Mathematics library
  - Unique Game mechanic of claiming enemies by Colouring
  - Custom collada-DAE importer for importing 3D models
  - Custom Frame Transformation classes
- **Juhuligan (PC)** [www.p-yank.com](http://www.p-yank.com)
  - Side scrolling 2D-Arcade game (inspired by Mario) using C# and XNA
  - Re-usable object oriented architecture and components
  - Game State management exploiting State design pattern & finite state automata
  - Dynamically changing Face expression on HUD representing current health using Bezier curves
- **Revenge of the Tanks (PC)** [www.p-yank.com](http://www.p-yank.com)
  - Turn based 2D game (inspired by Scorched Earth) using C++/OpenGL, Qt for UI & OpenGL Mathematics lib
  - Destroyable landscape using pixel-based collision detection
  - Tank AI is based on Finite State machines

## Education

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| • <b>University of North Carolina, Charlotte(USA)</b><br>MS in Computer Science<br>(Game Design & Development) | • <b>U.P. Technical University, Lucknow(India)</b><br>BS in Computer Science<br>(Software Development) |
| GPA: 3.67/4.00<br>May 2010   | July 2006  |

## Graduate Coursework

- **High Dynamic Range Images**
  - Implemented the High Dynamic range algorithm to retrieve the original color response function for the given photographic scene using Matlab
  - Final result closely resembled the natural scene and lighting conditions
- **Racquet Ball game**
  - Simulated experience of a Racquet ball game using the CAVE Virtual Reality technology
  - Player body tracked with head mounted tracking using C++ and OpenScenegraph

## Employment

- **University of North Carolina, Charlotte(USA)** July 2009 – Present  
**Role:** Research Assistant
  - Reconstruct terrain-surface from a point cloud using Marching Triangle Algorithm using C++ & CGAL library
  - Implemented Delaunay Triangulation constraint
  - Implemented renderer to view the CGAL Polyhedron model
  - Exposure to Computational Geometry concepts such as Polyhedron and half-edge data structure
- **3i Infotech, India** Nov 2007 – Feb 2008  
**Role:** Software Engineer
  - 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
  - Developed conceptual prototype in J2EE technologies for an automotive sector client
  - Underwent training in advance Database concepts, PL/SQL, Informatica ETL and ASP.NET (C#)
- **Ministry of Information Technology, Govt. of India** Jan 2005 – Jun 2006  
**Role:** Intern
  - 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
  - Custom Exception Library bubbled through the architecture to provide useful messages to the client