

Varun Ramachandran

EDUCATION

Anna University, India	Bachelor of Computer Science and Engg.	78.6%
Purdue University	Master of Science in Computer Science (12/10)	3.0 GPA(current)

TECHNICAL SKILLS

Languages:	C/C++, Lua, x86 Assembly, Cg, ActionScript 3, PHP, Java, SQL
Libraries :	OpenGL, Ogre 3D, Genesis 3D, MFC, wxWidgets, FLTK, OpenMPI, Novodex/PhysX, Boost, Luabind
Others :	Subversion, Microsoft Office, HTML, Flash, Photoshop, Sony Vegas, Milkshape, Dreamweaver, MySQL

PROJECTS

1. Graduate RA project

Have been working for a year on developing an MMORPG gameplay concept as a Graduate RA at the Computer Graphics and Visualization Lab in Purdue. The work involves simulation of ecosystems with a large amount of mobile agents and developing a math model to predict the behavior of the system.

2. Realtime RayTracing on a cluster

Programmed a real-time RayTracer to run on a Beowulf cluster using an optimized BVH based algorithm for my final year under-graduate project. Features involved typical Phong shading, hard shadows, texture mapping with bilinear filtering, distributed post-processing. The crux of the project involved efficient distribution of ray-tracing jobs while taking into account network bandwidth limitations.

3. Game Engine development

Worked as one of the two engine programmers in building an OpenGL based graphics and game engine. I developed the code for scene management for outdoor/indoor worlds, added deferred shading support to the existing forward rendering based engine, developed multiple tools to build levels and models and did a lot of code optimization to increase performance in multiple areas.

4. Independent 3D FPS game

Lead a team of 5 schoolmates during high school to develop a 3D FPS game using

Genesis 3D engine. I was the sole programmer in the team and I handled the entire gameplay code, AI for NPCs and special effects code. The game was completed in a period of 3 months and was published by SKOAR, a leading Video Game magazine.

5. Web development

Worked as a freelancer on many projects involving SEO, site cloning and interactive graphics application development.

ACHIEVEMENTS

1. Was part of a three member team that was placed 1st in India and 4th in Asia ICT Confederation International Software Competition, a programming contest, held in December 2003.
2. Placed 1st in technical paper presentation conducted in National Level Technical Event 'Pragyan' in NITT, India.
3. Placed 2nd in the Business Plan competition held at NITT following which TATA ELXSI offered to partner in our game development project.
4. Placed 2nd in India in Pragyan and Vortex Online Programming contests.
5. High School topper in Computer science in 11th and 12th grade examinations.
6. Awarded the Certificate of Merit by the Central Board of Secondary Education for being in the top 0.1% of all candidates in the All India Sr. Sec. School examinations in Physics.

PUBLICATIONS

1. "HPRS: A Hybrid P2P Reputation System using File and Peer Rating" in the proceedings of 'Information Assurance and Security International Conference' 2007 at Manchester.
2. "Faster 3D world handling and HSR using BSP trees, Octrees and hardware occlusion queries." Presented and won at national level symposiums at NIT Trichy and NIT Warangal.

WEBSITE

<http://www.varunramachandran.com/>
