

Piyush Soni

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OBJECTIVE

An intellectually challenging full time position in the field of Computer Graphics or Video Game Design.

EDUCATION

- MS in Computer Science, Georgia Tech., CGPA: **3.87/4.0** (Expected Graduation: **12/08**)
- B.Tech., Mechanical Engineering, Indian School of Mines(ISM) Dhanbad, India, CGPA: **4.17/5.0** (**05/05**)

SKILLS

- Languages:** C, C++, C#, ASP.net, VB.net, Java, FORTRAN, Processing, JavaScript, VBScript, Groovy
- Databases:** SQL Server 2000/2005, MS Access
- Others:** Web Services, AutoCAD, XML, XSLT, MATLAB, OpenGL, SharePoint Server, VSS, HOOPS
- Platforms:** Windows XP/2003/Vista, Linux

RESEARCH

- Virtual Surgery:** A 3D application for simulating heart surgery by cutting, bending and stitching arteries.(Current)
- VoxGrabber:** A tool for 3D volumetric Data Extraction, compression, transmission and rendering over a network.
- 'Constant Length Polyloop Smoothing'** and **'Thread Simulation'** under Prof. Jarek Rossignac, Georgia Tech.

PROFESSIONAL EXPERIENCE

- Software Development Intern, SolidWorks Corp.** (05/08 – 07/08)
 - Worked on SolidWorks' **eDrawings**, a universal CAD format viewing product for its 2009 release.
- Assistant Systems Engineer, Tata Consultancy Services Ltd., India** (09/05 – 08/07)
 - Developed Desktop and Web applications for the projects mentioned. Led a team of 5 engineers.
 - Content Management System:** A POC application developed for **NASDAQ**, in C#, ASP.net and Web Services.
 - Dock and Yard Management System:** An application developed for **CH Robinson**, Eden Prairie, MN from scratch including Architecture Design, Database design and programming in VB.net
 - Investment Proposal:** A large Web Application for **Merrill Lynch**, Hopewell NJ in C++, C#, Web Services.

PROJECTS

Academic

- User Level Thread Scheduler:** A Linux 2.6.x like scheduler in C for O(1) priority scheduling, affinity scheduling and co-scheduling user level threads in a multi core environment. (Fall 2008)
- 3D Booleans:** A robust implementation for carrying out 3D boolean operations like union, intersection, difference in complex triangle meshes (Spring 2008)
- 'Elements' Game:** A Multiplayer 3D ball racing game written in C++ using the C4 Game Engine involving Artificial intelligence and correct physics implementation. (Spring 2008)
- 'True Media' Search Engine:** A voice controlled system written in Java, for speech content based searching and indexing of videos. (Spring 2008)
- Multi Threaded HTTP Web Server & Client:** A scalable multi threaded web server along with the Client in C, implementing a subset of the HTTP Protocol. (Spring 2008)
- 3D Mobile Simulation:** Project in computer graphics involving animation with triangle meshes, 3D Morphing and multi directional shadows in 'Processing'.(A Java based programming language) (Fall 2007)
- Cure Monitoring System:** A computer controlled system for automatically monitoring curing of rubber tires with embedded piezo-electric sensor layers, written in C++. (Under Graduate)

Personal

- Robotic Arm:** A fully functional 4 degree of freedom robotic arm, controlled by C++
- LAN Chess:** A project to play Chess on a Local Area Network in real time, in C++.
- MS PaintBrush Look Alike:** A project functioning exactly like Microsoft Paintbrush, made in Borland C++ Version 3.0 with interrupts, mouse and graphics programming. (Website for more projects)

COURSES

- Fall 2007:** Computer Graphics, Algorithms and Computability, Software Development Processes
- Spring 2008:** 3D Complexity(Adv. Computer Graphics), Video Game Design, Advanced Operating Systems, Enterprise Computing

ACHIEVEMENTS

- IIT-JEE** Qualifier, All India Rank 2826 out of 1,26,000 Competitors (Top 2.2%)
- Joint Secretary**, NCSED, the software education and development society of ISM (2004)
- Instructor**, C++ for six months under the NCSED teaching program, ISM (2004)
- First prize**, 'Mechanika', the mechanical structure building contest in ISM (2005)
- First prize**, National C++ Debugging contest held in ISM(2003)