ANKUR SHEEL

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OBJECTIVE

Seeking a full time position as a software developer to utilize and enhances my skills and knowledge.

EDUCATION

- **M.S. : Computer Science** ***May 2010***
  University of Southern California
  Current GPA : 3.69
- **B.E. : Computer Science and Engineering** ***May 2005***
  Manipal Institute of Technology(MAHE), India

TECHNICAL SKILLS

Programming Languages : C, C++, JAVA, DirectX 9.0, SQL, HTML, CSS, DOM, XNA
Tools : Subversion, Microsoft Visual Studio, Eclipse

WORK EXPERIENCE

Student Worker*, FMS-Network Services*, USC**,** Los Angeles, CA ***Feb '09 – Apr '09***

- Troubleshooting and resolving hardware and software related problems
- Installing and maintaining computer systems

Game Programmer*, Trine Game Studio* , Mumbai, India ***Jun '07 – Apr '08***

- Designed and Implemented the gameplay and AI system for various PC games

Game Programmer *, Dhruva Interactive,* Bengaluru**,** India ***Jul '06 – Jun '07***

- Designed and Implemented new AI algorithms (using existing methods) for games so that they could run on mobile devices w.r.t constraints in memory etc.
- Worked closely with designers and initiated the development of tools, so that they could modify the AI and gameplay parameters to balance the game.

Associate*, Perot Systems TS(India)*, Noida, India ***Jun '05 – Jul '06***

- Analyzed, Coded and Tested programs, screens and queries
- Received a "Letter of Appreciation" from McKesson Corporation and a "Pat On the Back" award from Perot Systems for enthusiastic participation and additional team effort

Intern*, Perot Systems TS(India)*, Noida, India ***Jan '05 – May '05***

- Coded Screens using COBOL
- Analyzed existing programs and queries

Intern *, HCL Technologies Ltd.*, Noida, India ***Jun '04 – Jul '04***

- Developed a standalone help component using XML and Visual Basic

Intern *, Gestetner Ltd.*, Jammu, India ***Sep '03 – Oct '03***

- Developed required software for report generation using MS Access

PROJECTS

- **USC TEAMCORE RESEARCH GROUP – Evacuation Simulation**
  - Used OpenSteer to Design and implement realistic non-emergency behaviors for Agents from the existing Steering Behaviors ***Spring '10***
- **RE-INFORCEMENT LEARNING**
  - Implemented an agent that learnt how to play Tetris through Q learning ***Fall '09***
  - Defined a set of features to reduce the state space to an acceptable level
- **SOFTWARE MULTIAGENT SYSTEMS**
  - As part of a 2 member team, Implemented a poker bot to play the Texas Hold 'Em variation using game theory concepts to estimate the strength of the opponents hand versus the strength of our hand ***Fall '09***
  - Setup the system so that students in the class could debug and test their code against other bots

- **USC GAMEPIPE LAB – COSMOPOLIS ONLINE GAME** — ***Summer '09***
  - Implemented the UI interface
- **AFFECTIVE COMPUTING**
  - Used CERT, a facial features recognition program, to examine pictures taken by a webcam in extremely short intervals, and then used that data to modify the internal game mechanics of Quake 3 in real time. — ***Spring '09***
  - As part of a 3 member team, Designed and Implemented the Fuzzy Logic system which read the data produced by CERT and processed it to determine the most prevalent emotion expressed in the most recently-taken picture
- **NETWORKED ARTIFICIAL INTELLIGENCE**
  - Developed a Reliable UDP protocol and simulated AI (steering) behaviors over a network with client-server architecture involving multiple systems. — ***Spring '09***
  - Integrated the same with an existing engine
- **FOUNDATIONS OF ARTIFICIAL INTELLIGENCE**
  - Implemented the A* algorithm and the knowledge base to simulate a restaurant environment with a multi-agent architecture using JAVA & PowerLoom — ***Fall '08***
- **INTRODUCTION TO ROBOTICS**
  - Programmed an autonomous robot to navigate a maze and find a pre-defined object
  - Implemented a motion model to recalculate the probabilities of its current location in the maze using an ultrasonic sensor. — ***Fall '08***
  - Used blob-recognition to find the object in the maze
- **WEB TECHNOLOGIES**
  - Using Perl, AXAJ and Google Maps API, displayed TV channels and their program listings in an Overlay on the map. — ***Fall '08***
  - Developed a dynamic web application using XML, DOM and JavaScript on Apache Tomcat Server.
- **HOBBY PROJECTS**
  - Pong clone using Visual C++ and DirectX 9.0 (WIP)
  - Implemented a NN class(with back propagation) and successfully trained for (as an example) OR/AND/XOR etc logic functions using C++
  - Air Hockey –.Single Player. Developed using Visual C# and XNA
  - Implemented A* algorithm using C++ and DirectX9.0
  - Implemented Genetic Algorithms to solve Magic Squares

CERTIFICATIONS AND COMPETITIONS

- **MOBILE HACKATHON, *USC*** — ***Apr '09***
  - Designed and Developed a multi-player game for the Iphone that adhered to the competition theme "Change that can fit in your pocket"
  - Created with a team of 5 members in a 48 hr timeline.
- **PROJECT POSSIBILITY: SS12 – CODE FOR A CAUSE(USC)** — ***Oct '08***
  - Designed and Implemented the functionality to replace a computer mouse using a Neural Impulse Actuator (NIA) to adhere to the competition theme of developing software to assist disabled people.
  - Won 2nd place out of 6 teams. Created with a team of 6 members in a 48 hr timeline
- IBM Certified Database Associate : DB2 Universal Database v8.1 Fundamentals — ***Jun '05***

ACTIVITIES AND INTERESTS

- **Senior Vice President**, ***Viterbi Graduate Student Organization (VGSA)***, USC — ***Spring '10***
  - Coordinated between all the major committees of VGSA
  - Reduced the turnaround time between the planning and execution of events
- **Vice President(Programs), *Viterbi Graduate Student Organization (VGSA)***, USC — ***Fall '09***
  - Planned and managed a number of successful events.
  - Successfully planned and executed the 1st Technical Competition for graduate engineering students of all disciplines in the history of VGSA
- **Finance Chair**, ***Computer Science Graduate Organization (CSGO)***, USC — ***Spring' 09 – Fall '09***
  - Successfully managed the budget for the various events held by CSGO
- **Senator(Computer Science)**, ***Viterbi Graduate Student Organization (VGSA)***, USC — ***Spring '09***
  - Planned and Executed various workshops directed towards the interests of graduate CS students
  - Responsible for the publicity for VGSA events as well as maintaining the VGSA

website

- **Secretary** & **Treasurer**, ***Photography Club***, Manipal Institute of Technology, ***2004 – '05***
  - Successfully managed the budget.
  - Planned and Executed a number of workshops and competitions
- **Class representative** & **Member of the Students Council**, ***Manipal Institute of Technology*** ***2003 – '04***
  - Acted as conduit between the class and the faculty and the Students Council
  - Responsible for forwarding the concerns of the students to the faculty and the Students Council
- Member – Manipal Institute of Technology, Photography Club ***2002 - 04***
- Sample Code and Game Development Blog : http://speedrunsdev.blogspot.com/