

SWATI YELGULWAR

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Objective: To work with a technology intensive firm to gain valuable knowledge and skills.

Education:

University of Southern California, Los Angeles, CA

- **Master of Science in Electrical Engineering** **May 2009**
 - Relevant coursework
 - **Computer Networks**
 - Capture and analysis of TCP/IP packets using **Ethereal(Wireshark)**
 - Simulation of Ethernet and token ring networks, as well as routing protocols like OSPF and RIP using **OPNET**
 - Implementation of a client server system in **C** consisting of clients, servers and routers, interacting with each other via TCP and UDP (**Socket Programming**).
 - **Probabilistic methods in Computer Modeling**
 - Simulation of various queuing systems, including M/M/1, M/M/1/N, M/M/K,N and M/G/1 via a generic implementation done in **C**
 - **Broadband Architectures**
 - **Introduction to Programming Systems (OOP)**
 - Used the **ccc_win** library for simple graphics programming in **C++**. One of the interesting projects was to develop a maze solver using a recursive algorithm
 - **Computer Vision**
 - Implemented various processing algorithms in **C++** using the **OpenCV** library, including line detection, edge detection, clustering, stereo matching and image from motion
 - **Database systems**
 - Implemented an application with a RDBMS backend via the **MySQL** database. The DB was populated with data from external sources like TODO.
 - **Introduction to Digital Image Processing**
 - Implemented various image processing algorithms like contrast manipulation, noise removal, morphological processing, image registration, watermarking, texture analysis, optical character recognition in **C++**
 - **Wireless Internet and Pervasive Computing**
 - Implemented a distributed system architecture using **Jini** which is a **Java** based technology. The hospital administrative environment which have a lot of manual tasks like form filling, record-keeping, database entry etc were automated thereby decreasing the latency between entering the hospital and actually seeing the doctor.
- **Veer mata Jijabai Technological Institute (VJTI), Mumbai, India**
 - **Bachelor of Engineering in Electronics Engineering** **June 2006**
 - Project: Virtual instrument for the display and analysis of EEG signals, using **LabView**
 - Separated and analyzed the individual components of an EEG wave using power spectra. Used the instrument to study sleep disorders, anxiety, Alzheimer's disease.

Skills:

Languages & technologies: C, C++, STL, OpenCV, HTML, XML, CSS, XSLT, Assembly language (8085, 8086, 8051), Socket programming, TCP/IP suite(TCP, IP, UDP, DNS, DHCP, ARP, ARQ), 802.3, 802.11, RIP, OSPF, ATM and application layer protocols like HTTP and FTP.

Tools and IDEs: Ethereal/Wireshark, Opnet, Labview, Code Warrior, Visual Studio, Palm tools like PalmSim, Make, MS Access, MySQL, IIS, MS Office suite.

Some experience with: Visual Basic, ASP, Python, Solaris, Linux, PHP

Employment:

- **Intern**, The Robotics Institute, Mumbai (05/2007 - 07/2007)
 - Researched and prepared content for an introductory robotics training program aimed at high school students, which involved simplifying higher concepts without losing accuracy.
 - Conceptualized and modeled experiments to demonstrate basic concepts in electronics.
- **Software Engineer**, Geodesic, Mumbai (07/2006 - 04/2007)
 - Wrote infrastructure components in **C** for extracting URLs out of an XML file. This was used for the **Radio Mundu** product.
 - Trained on **PalmSim**, a Palm OS simulator for introductory testing on the platform.
 - Trained on the presentation layer of a CRM system written in **ASP**.

*Relocation assistance not required.