Darsh Shah

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Objective

To obtain a summer internship in the systems domain in order to utilize my technical and problem solving skills.

Education

Carnegie Mellon University, Pittsburgh, PA
Master of Science in Information Networking (Expected Graduation Dec 2014)
Relevant courses: Intro to Computer Systems, Fundamentals of Embedded Systems, Fundamentals of Telecom & Comp Networks

Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), Gandhinagar, India
Bachelor of Tech in Information And Communication Technology | GPA:8.83/10 | May, 2012

Experience

Associate Engineer, Qualcomm India Pvt. Ltd.   Jun, 12 – July, 13
- Created test APIs for FastCV library and designed an automation suite using Perl to test them on different targets.
- Used Matlab's image processing tools to make test framework for Vuforia Augmented Reality app.
- Performed memory leak testing using Valgrind and used NI-PQA tool for video quality analysis.

Developer, Playpower Labs, India   Jan, 12 - May, 12
- Implemented 3 math based educational games in flash using Actionscript 3.0 as a game developer intern.
- Designed a structural framework in PureMVC for coding future games.

Research Assistant, Embedded Systems & Sensor Networks Research Group, DA-IICT   Aug, 11 – Dec, 11
- Worked on OpticalCENSE project to make a Sensor Network Testbed for Tokamak using IR instead of RF.
- Researched various methods of communications and made prototypes on custom PCB for the developed designs.
- Conducted alpha testing in the lab to prove the speed gain and test NVRAM.

Skills

Programming Language: Expert: C and Perl; Intermediate: C++, Java, Verilog, Actionscript 3.0, Shell scripting; Beginner: SQL, Assembly language for ARM, NesC
Tools (Software): Linux, AVR Studio, Xilinx, Matlab, Labview, NS2, Eagle, Adobe Flash, FreeRTOS, Android
Tools (Hardware): Spartan 3 FPGA, ATmega16/32, Basic Stamp2, Lego Mindstrom Nxt, Arduino, Raspberry Pi, STK500 and Fablab tools including Laser cutter, Shopbot and Modela.

Projects

smarT: A smart and interactive t-shirt | MIT Media Lab Workshop in India | Mar, 12 | Team Size – 4
Made a prototype of a t-shirt which has a LED panel in front side for displaying information on the shirt. The panel displays the text sent via the controller. The final idea is to read gestures using camera and display text on the LED panel.

SeismicCENSE: Interfacing Zigbit with ADS1255 (24-bit ADC) | DA-IICT | Feb,11 – Apr,11 | Team Size – 2
The aim of this project was to interface Zigbit with a high resolution Analog to Digital convertor to measure the seismic activity on Moon and relay the information to base station.

Computation of 4 Pt DFT using Radix2 FFT Algorithm on FPGA | DA-IICT | Oct,10 – Nov,10 | Team Size-5
Implemented the FFT algorithm on the FPGA. Input was given from Function Generator, sampled using custom ADC and output was shown on oscilloscope and LEDs. The butterfly algorithm was used and was coded in Verilog.

Load Balancing Transport Protocol for WSN | DA-IICT | Oct,11 – Nov,11 |Team Size-2
Added data aggregation and load balancing into Dynamic Source Routing protocol and simulated it using NS2 software.

CONNECT2LEARN: An Interactive Virtual Classroom | DA-IICT | Jan,11 – Apr,11 | Team Size – 10
As a part of software engineering course, we are made an open source virtual classroom project using Java. The virtual classroom project aims at connecting students to teachers via internet to enable long distance learning.

Honors and Leadership

- Served as a Secretary and Event Coordinator at IEEE Student Branch, DA-IICT.
- Was group leader in several undergrad projects with team size ranging from 5-10.