

Mahim Raj Gupta

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EDUCATION

Northwestern University, Evanston, Illinois

Masters of Science in Computer Engineering

September 2013-Anticipated December 2014

Cumulative GPA: 3.54/4

Relevant Coursework: Microprocessor System Project, Computer Architecture, ASIC and FPGA, Advance Mechantronics, Art of Multiprocessor programming, Advance topics in embedded systems, Sensors

Institute of Information Technology and Management, Gwalior, MP, India

September 2008-June2012

Bachelors of Engineering with Honours in Electronics and Communication Engineering

Cumulative GPA: 3.60/4

Relevant Coursework: Microcontrollers, Mobile Communication, Computer System Organization, Analog and Digital Communication.

WORK EXPERIENCES

Systems Design Engineering Intern at SanDisk Inc.

June 2014-September 2014

- Working with the Removable Product Group (USB/SD/uSD) to improve and estimate the performance and endurance.
- Performed controller-based NAND evaluation to characterize NAND chips by extensive sequence of memory tests.
- Responsible for designing and implementing post processing python scripts.
- Designed Python based Graphic User Interface to analyse the weekly memory yield of different test facilities.

Graduate Teaching Assistant for Microprocessor System Design at Northwestern University

April 2014-June2014

- Involved with Professor Larry Henschen in development of the course structure, assignments and lab work.
- Conducting TA and Classroom sessions to assist more than 40 students solve course or project related issues.
- Working on 8051 microcontroller to design lab assignments. Grading homework and lab projects.

Systems Engineer Trainee with iGATE India Ltd

May 2013-August 2013

- World class training on C, C++, HTML with JavaScripts.
- Experience on Pseudo Live Project on Network Monitoring System with live network packet tracking.
- Worked with a team of 5 members to implement EMS. Worked on LINUX operating system.

Embedded Systems Engineering Intern at ThinkLabs

May 2011-July 2011

- Trained on ATmega128 microcontroller based development platform.
- Implemented programs to explore features of ATmega128, Communication Protocol and different wireless protocol.
- Interfaced various sensors, displays and communication modules such XBee, Bluetooth and GSM.

PROJECTS

Automatic Grocery List

January 2014-June 2014

- Generating an automatic list for grocery using weight sensor based containers.
- Data is uploaded on cloud which is then parsed on google docs using the Wi-Fi chip TI CC3000.
- Implemented designs for container on SolidWoks 2013 CAD for better 3D visualization and ease of calibration.
- Responsible for calibrating the Wi-Fi chip and script for parsing data on google cloud.

Bike Inclinometer

April 2014-June 2014

- Compute the inclination of the bike and evaluate the handle bar angle.
- Data was plotted on a TFT display with two user controlled modes bike angle vs time and handle angle vs time.
- Developed code for setup and initializing the TFT display with PIC microcontroller using SPI communication protocol.
- Responsible for interfacing all the peripherals with the PIC microcontroller.

Dual Tank Game on FPGA

January 2014-March 2014

- Duel Tank shooting game, implemented the gaming algorithm using behavioural VHDL.
- PS2 Keyboard, VGA Monitor, LCD and 7 segment display used as external peripherals with ALTERA DE-2 board.
- Improved the efficiency of the game by using single process with finite state machine.

Motor Control System using PIC32 Microcontroller

February 2014-March 2014

- Controlling DC motor using PIC32 microcontroller to follow cubic and step trajectories.
- H-bridge A3909 and current sensor circuit MAX9918 with dsPIC33FJ64MC802 to design and build the circuit.
- Implemented PID for motion controller and PI for current controller for error reduction working at 5 KHz.

SKILLS

Hardware: Microchip PIC32 Microcontrollers, Stellaris@LM3S8962 Microcontroller, ALTERA DE-2, Intel 8051, PIC Kit3

Platforms: MPLABX IDEv1.95, Eagle5.12.0, Python 2.7.7, Quartus II 13.0, ModelSim SE/EE 5.4a, Keil uVision4, Arduino 1.5.5-r2,SolidWorks 2013

Computer: Microsoft Word, Microsoft PowerPoint, Adobe Illustrator, LINUX, Embedded C and C++, UML Modelling