

Akhil Guliani

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Mobile: +1650-960-5611

ACADEMIC QUALIFICATIONS

Degree	Board/University	Expected Date	%/CGPA
Master of Science in Computer Engineering	Northwestern University	March 2016	3.9
Bachelor of Engineering in Instrumentation & Control	Delhi University	August 2012	76.6% (Class I with Distinction)

HONORS, PRIZES, AWARDS, AND FELLOWSHIPS

- Merit Scholarship from Delhi University, 2012 and 2008
- IEEE India Council's M V Chauhan Student Paper contest 2012 , 3rd Prize
- Outstanding Student Volunteer Award 2011 by IEEE Delhi-Section

SELECT PROJECTS AND PAPERS

- Master's Thesis Project:
Developing prediction schemes for temperature aware process scheduling in HPC Environment.
- Implementing Device File Virtualization for Palacios VMM:
Developed as part of a team a proof of concept for device file virtualization for Palacios Virtual Machine Monitor. The concept allows a Linux guest to access the device files of the Linux host.
- BLE Smartwatch Project
Developed as part of a team a simple BLE based smartwatch platform for Use in Empathetic Systems Lab at Northwestern. I was responsible for developing the Arduino firmware for the collecting sensor data and transmitting it to an android phone over Bluetooth Low Energy and developing the android application to receive and relay it to an external server.
- Determining the Impact of Hashtags used in Marketing Campaigns on Social Media Platforms Using Sentiment Analysis:
A Data analytics project to study the effect of user sentiments on text surrounding hashtags in social media posts to gauge the public response to a marketing campaign associated with the hashtag.
- Study of Loop Perforation for use in GPU's
The goal of this project was to find a way to implement approximate computing technique of loop perforation on GPU Image processing algorithms and study it so as to ascertain its usability for more complex tasks on the basis of time v/s quality on output
- Designing Wireless File transfer mechanism for Remote Patient monitoring system
Developed as part of a team a mechanism to capture and transmit asynchronously and reliably ordered sets of data being produced by a remote sensor over WLAN to be used for a remote patient monitoring system.
- Analysis of Electrical Characteristics using a Lambert W-Function Technique and MATLAB Simulation for Dye Sensitised ZnO Solar Cell; Renu Guliani , Amit Jain ,Swati Sharma, Davinder Kaur, Akhil Guliani , Avinashi Kapoor; The Open Renewable Energy Journal, 2013
- The Study and Implementation of Natural User Interface using Kinect; Akhil Guliani - Presented at IEEE Indicon 2012, (3rd Prize in IEEE India Council M V Chauhan Paper contest 2012).
- Study and Implementation of Natural User Interfaces using Kinect (Undergraduate Thesis)
As part of Undergraduate thesis work as part of a Team studied and implemented various natural user interface schemes to control physical actuators such as motors using the Kinect Sensor for Windows.
- Study and Implementation of Real Time Operating System for 8-Bit Microcontrollers
As Part of Internship at IIT Delhi, studied Real Time operating systems available for a TinyAVR microcontroller. Finally decided to use Femto OS. Built the reference board and implemented an I2C driver for Femto OS for the design.
- Design and implementation of a programmer for TI CC2530
Tasked with developing a microcontroller based programmer for the SoC TI CC2530, as part of Internship at IIT Delhi. Developed the embedded hardware and software for the programmer based on a given design. Also patched the Linux OS application for the programmer to provide it the ability to recognize and program the SoC.

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- Design of PCB for AT89C51

As part of an Internship at IIT Delhi, studied the 8051 Architecture and developed a reference development printed circuit board for Atmel's AT89C51 chip implementation of it.

FULL TIME WORK EXPERIENCE

- Senior Engineer at GAIL India Limited September 2012 to August 2014, working on GAIL's Premier Petrochemical plant expansion project at GAIL Pata. Primary responsibility is planning, coordinating and executing instrumentation and control system related jobs for the different units at the complex.

INTERNSHIPS/PART TIME WORK EXPERIENCE

- Teaching Assistant Course (EECS 339 Intro to Databases), Northwestern University from September 2015 to December 2015
- Research Assistant, Northwestern University from July 2015 to September 2015
- Air India Engineering Northern Region at Indira Gandhi International Airport, New Delhi from Dec 2011 to January 2012
- Global Internship Program in Engineering Design and Innovation of the Airtel IIT Delhi Centre of Excellence in Telecommunication (GIPEDI.AICET), Bharti School of Telecommunication Technology and Management, Indian Institute of Technology Delhi under Prof. Subrat Kar From 15/12/2010 to 15/1/2011 and 15/05/2011 to 15/07/2011
- Winter Internship at NSIT Delhi From 10/12/2009 to 10/1/2010

VOLUNTEER EXPERIENCE

- Active Student Member of IEEE, Since 2008
- Volunteer for organizing the 4th IEEE International *Conference* on Power Electronics on 28th, 29th, and 30th January 2011 held at NSIT, Delhi

TECHNICAL SKILLS

- Software Skills:
 - Languages : C and C++, C#, Java, Python, MATLAB, Maple, Pspice, LabView, Linux Scripting
 - Packages: EDA tools such as OrCAD, GEDA, etc. ; Visual Studio 2010; Android Studio
- Hardware Skills :
 - MCS-51, AVR-core, MSP430, Arduino