Siddharth Sharma

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EDUCATION

Bachelor of Engineering, (August 2010 - June 2014)
Division of Instrumentation and Control Engineering, **62.8%**
University of Delhi, Netaji Subhas Institute of Technology (NSIT), New Delhi, India

TECHNICAL SKILLS

Programming: C/C++, Python, MATLAB, VHDL, Processing, LaTeX
Software Tools: : EagleCAD, PSpice, Cadence Virtuoso
Hardware: Arduino, Raspberry Pi, pcDuino, Atmel AVR, ARM Cortex M3 (with TI StellarisWare)
Operating Systems: Windows, Linux (Ubuntu and Raspbian)

INTERNSHIPS AND RESEARCH POSITIONS

Summer Intern, Viterbi School of Engineering, University of Southern California, USA June 2013–August 2013

- Worked in the BioRC research group led by Dr. Alice C. Parker in the Ming Hsieh School of Electrical Engineering. The target of the research group is to mimic the human brains neural structure through analog VLSI and nanotechnology
- Within the BioRC group, involved with the C.Elegans project team with target to mimic the neural structure of C.Elegans worm. To implement this, developed software and algorithms to automate the synthesis of analog neural network circuits
- Presented poster titled "Automatic Neuromorphic Circuit Connection Software" on the same at Ming Hsieh School of Electrical Engineering

Research Intern at mLabs Research, New Delhi September 2012 - May 2013

- Worked on an internet of things project

Student, Centre for Electronics Development and Technology (CEDT), Netaji Subhas Institute of Technology December 2011 - July 2012

- Attended lectures on Embedded Systems Design and Computer Architecture conducted by professor D.V. Gadre, Divison of Electronics and Communication Engineering, NSIT
- Attended workshop on Using Arduino in Embedded Systems projects and PCB Design and Fabrication
- Was involved in various hardware projects here. Details given in the 'Projects Undertaken' section

Summer Industrial Training at Bosch Chassis Systems, Gurgaon, India
June 2011- July 2011

- Worked on project titled "Implementation of Poka–Yoke Using Electronic Sensors". Designed and implemented a panel for Poka-Yoke on a riveting machine in the drum-brake house in the manufacturing plant

- Wrote a review paper with the same title that won First Position (cash prize of Rs. 5000) at Kriti: Paper Presentation Competition during Innovision 2012, the annual technical fest of Netaji Subhas Institute of Technology
- Learned about the various manufacturing processes employed in the plant. Learned about various quality assurance techniques like Poka–Yoke and Six–Sigma and how they are employed in the manufacturing plant
- Attended a two–day workshop on Introduction to Programmable Logic Controllers (PLCs) conducted by visiting engineer from Siemens, Italy

PROJECTS UNDERTAKEN

Undergraduate Thesis: Implementing speaker recognition using Student's–t Mixture Model January 2014 - June 2014

Mentor: Dr. Smriti Srivastava, Dean, Undergraduate Studies, NSIT

- Developed a robust, text independent speaker recognition system modelled on Student's-t mixtures.
- Defended thesis in front of panel of faculty members of Division of Instumentation and Control Engineering, NSIT. Was awarded and evaluation of 80/100

"Pac–Man" on Digital Storage Oscilloscope December 2012

- Developed single player Pac–Man on a Digital Storage Oscilloscope (DSO) as part of Atmel Oscilloscope Design Challenge, Centre for Electronic Development and Technology, NSIT, New Delhi
- Established Graphic Display in X–Y mode of DSO using two R-2R ladder network circuit based Digital to Analog Converter and Gameplay through a basic controller interfaced by Arduino

Non-Invasive Heart Rate Monitor Sometime 2012

Laboratory: CEDT, NSIT

- Developed the heart-rate monitor using IR sensor by employing the principles of Plethysmography
- Displayed ECG graph using Processing

"Snake" game on an 8x8 LED Matrix Sometime, 2012

Laboratory: CEDT,NSIT

- Played through a basic controller interfaced with Arduino

PCB Design and Fabrication Sometime, 2012

Laboratory: CEDT,NSIT

- Designed the PCB for a 5VDC voltage–regulated power supply with maximum current drive of 1A using EagleCAD
- Provided fold-back current limiting for short-circuit protection
- Fabricated the PCB using acid etching method

LEADERSHIP EXPERIENCE

President, Crescendo - Music Society of NSIT June 2012 - May 2013

- Previously a defunct society, brought significant improvement in activity and presence
- Appointed an administrative core team of 6 members out of a total of around 50 members in the society

- Successful organization of Crescendo Eve in September, 2012, with 15 musical performances of varied genres by society members. Crescendo Eve is now an annual event at NSIT
- Successful stint at Rendezvous 2013, Annual Cultural Fest of IIT - Delhi, with 2nd position in Solo Western Vocals, 3rd position in Solo Instrumentals and participation in Group Western Vocals

EXTRA-CURRICULAR ACTIVITIES AND INTERESTS

- Playing the bass guitar for two years. Familiar with musical staff notation.
- Appreciate and enjoy exploring various genres of music. Current favourite band is Porcupine Tree, a British progressive rock band
- Current favourite author Ayn Rand