INDRAPRASTHA INSTITUTE of INFORMATION TECHNOLOGY DELHI

Varun Kumar

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Education

Indraprastha Institute of Information Technology B.Tech (Electronics and Communication Engineering)	2013-present CGPA 7.50/10 (till IVth Semester)
Laxman Public School, Hauz Khas, New Delhi CBSE	2010-12 85.00 % (aggregate)
The Frank Antony Public School, New Delhi ICSE	1998-2010 74.00 % (aggregate)

Skills

Expertise Area	Embedded, Communication Systems
Programming Language	C, Embedded C, Python, Bash, Verilog, MIPS-32(assembly) Familar with: Java, C++, HTML, CSS
Tools and Technologies	AVR-GCC, GNUradio, OpenBTS, MTLAB, LTspice, Eagle CAD, Git, Github, Code::Blocks, Linux, SVN, Wireshark, Xilinx Familar with: ROS, Corel Draw, Asterisk(VoIP)
Hardware	Atmega328p, Arduino Uno, Arduino Mega, NI-USRP2920, NI-USRP2921, NI-USRP2922, FPGA Spartan3E XC3S250E CP132

Research Based Project

Research	Swarat Guide: Dr. Jyoti Sinha IIITD's Autonimous car project	(2013 – 2014)
	Implemented **Base Transceiver Station** BTS, using NI-USRP-2922 and OpenBTS Guide: Dr. Vivek Bohara https://sites.google.com/a/iiitd.ac.in/vivek-ashok-bohara/	(2015 – present)

Projects

Surveillance Car Controlled via DTMF
Published on Engineer's Garage, http://bit.ly/1dZlUhT
Designed a low cost, human controlled vehicle capable of doing surveillance in an unmanned territory.

Controlling Mouse Pointer Using Python Script
Published on Engineer's Garage, http://bit.ly/1Ib3nI6
Made use of serial library in python to parse data from atmega328p to my pc, using my own UART library in embedded C for atmega328p

Reaction Time Game on Atmega328p
Published on Engineer's Garage, http://bit.ly/1JW1DlZ
Implementing switch debouncing in software. Used external and pin change interrupts of atmega328p to take input from user as opposed to generic method.

Analysis and Implementation of BPSK Modulation scheme using USRP-2920 and GNUradio
Implemented Transmitter and Receiver for BPSK on GNUradio. BPSK modulation scheme was used to send and receive two symbols using USRP-2920

Adaptive Screen Brightness using LDR and Python Script
Published on Engineer's Garage, http://bit.ly/1o1XKIJ
Just like the adaptive brightness feature in smart phones, build a similar feature for laptops and PCs

AVR(Atmega328p) Library for LCD JHD162A
Published on Engineer's Garage, http://bit.ly/1OpsRVO
Build my own embedded C library for atmega328p, inspired from Arduino IDE library

My Github profile: https://github.com/varun13169
My ***other projects*** can be viewed on: http://home.iiitd.edu.in/~varun13169/

Positions of Responsibility

Teaching Assistant, Introduction to Engineering Design@IIITD	(2016 – present)
Co-Founder of Robotics club at IIITD	(2015 – present)
Member of Student Council, ECE'13 representative	(2014 – present)
Event Head of RoboCon, Esya'14(TechFest)	(August, 2014)

Awards and Achievements

Finalist in Texas Instruments Analog Maker Competition, Finalist in RoboCon'13,

Interests and Hobbies

Speed-Cuber: Can solve whole Rubix Cube under 1minute 30seconds
Power lifting
Cricket

Declaration: The above information is correct to the best of my knowledge.
-Varun
Dt. February 26, 2016