PRABHPREET SINGH DUA

in.linkedin.com/in/prabhpreetdua | prabhpreets.dua@st.niituniversity.in

SKILLS

- **Programming Languages**: C (Embedded and ANSI C), Java (Intermediate), Ruby
- **Microcontroller Programming**: ARM Cortex M3 (Basic knowledge), Embedded C on AVR ATMEGA (16,128,328,2560), CCS C and assembly(PIC Mid Range Series), Arduino Uno (Intermediate)
- **Hardware Languages**: VHDL (Basic)
- **Simulation Software**: MATLAB (Intermediate), Proteus 8 (PCB Layout and Microprocessor code simulation), PSpice (Analog Circuits), NS2 & NS3, Cisco Packet Tracer
- **Web Development**: JavaScript (Meteor Web Framework, jQuery), HTML5, CSS3, PHP (Basic)

ELECTRONICS AND COMMUNICATION COURSES

Currently pursuing in 6th Semester:

Advanced Digital Signal Processing	Advanced Embedded Systems	Digital Image Processing	Communication Networks
R&D: Cooperative Spectrum Sharing in Cognitive Radio Networks			

Completed in previous semesters:

Electrical Science	Analog Electronics	Digital Logic and Circuits	Signals and Systems
Communication Systems	Digital Signal Processing	Electromagnetic Theory	Microprocessors and Microcontrollers
Digital Communication	Semiconductor Principles	Integrated Electronics	Operating Systems

EXTERNAL COURSES COMPLETED

- Hewlett Packard Education Services Training in Embedded Systems & Robotics (Duration 4 Weeks) with A Grade, Bangalore, May-June 2014
- BSNL Vocational Training in Telecommunication Technologies (Level B Duration 2 Weeks) with A+ Grade, Bangalore, July 2014

CONFERENCES/ SEMINARS ATTENDED

- COMSNETS 2015 – 7th International Conference on COMmunication Systems & NETworkS, Bangalore (January 2015)
- IBNC India Workshop on Cisco Network Design & Implementation (January 2015)

PROJECT EXPERIENCE

Digit Recognition Using Neural Networks (NIIT University)

Developed a Digit Recognition System using neural networks in Digital Image Processing (Learned from Coursera's Machine Learning Course)

Real time EDF Scheduler on ATMEGA 2560 Microcontroller (NIIT University)

Developed a real time Earliest Deadline First scheduler on ATMEGA2560 microcontroller and ATMEGA328 (Arduino). (http://prabhpreet.github.io/Scheduler/)

E-Yantra Robotic Competition 2014, IIT Bombay (Represented NIIT University)

Lead a team from NIIT University and developed a weed picking robot on NEX Robotics Firebird V platform (with ATMEGA 2560 microcontroller). The robot traverses a black line, distinguishes weeds and plants (by height), picks the weed and dumps them in a designated place.

Automatic Room Temperature Control (NIIT University)

Lead project team and developed prototype for controlling room temperature on user preference by adjusting vents of Earth Air Cooling System (used in our university hostels). Developed the algorithm and wrote code in C (CCS) for PIC16F877A, designed the circuit and PCB. As a team built working prototype and successfully tested for the design goals (Demo: http://youtu.be/kcRBH8WgSn8)

Badnaam (Program in Java), NIIT University

Built a Java GUI program for blurring a face in a photograph for a 3rd Semester OOP Course project. Manually implemented a convolution and blur radius icon hover mechanism for blurring. (Download at http://goo.gl/czdZRD)

NU Avenues (Blogging platform), NIIT University

Developed and maintained an informal university online blogging community called Avenues on Tumblr. Also did custom theming and developed a unique sticky navigation bar using jQuery and CSS3. Archives at http://supnu.tumblr.com (previously on http://nuavenues.in)

Vividha Website (Collaborative platform), NIIT University

Developed a website for university's creative club, Vividha. Developed a RSS feed parser in PHP and using regular expressions for displaying public Google calendar events. No readymade web framework was used. (http://vividha.nuavenues.in)

Programmer, Rocky Mountain Robotics (2008-2010), Colorado, USA

Worked as a member of programming team for Team #662, Rocky Mountain Robotics for FIRST Robotics Competition at Colorado State Level. In 2008, I worked on programs to get input from joystick controls in C. In 2009, my role was to program the pneumatic arm controls for the robot, in C++. FIRST Robotics open source libraries were used.