Krishna Bharadwaj Chivukula

EDUCATION:

- B. Tech. in Electronics and Communication Engineering, SRM UNIVERSITY, India.	
Graduated In: July 2012 CGPA: 8.70/10	
- Pre-University Degree , Board of Intermediate Education, Hyderabad, India.	Graduated In: March 2008
Grades: 85.00%	
 High School Degree, Board of Secondary Education, Hyderabad, India. 	Graduated In: April 2006
Grades: 90.33%	
TECHNICAL SKILLS:	
– Operating Systems: Ubuntu(Linux) and Windows	

- <u>Operating Systems</u>: Ubuntu(Linux) and Windows
 <u>Languages</u>: Verilog, Basics of 'C' language
- <u>Tools</u>: Mentor Graphics ModelSim, Xilinx ISC, Cadence RTL Compiler, Matlab, MS Office,

B. Tech. COURSES:

Basic Engineering	Electronic Circuits	Control System
Electric Circuits	Linear Integrated Circuits	Antenna and Wave Propagation
Electromagnetic Theory and Waveguides	Transmission Lines and Networks	Digital Communication
Electronic Devices	Communication Theory	VLSI Devices and Design
Digital Systems	Digital Signal Processing	ASIC Design
Signals and Systems	Electronic Measurements and	Computer Communication
Microwave and RF Design	Instrumentation	Wireless Communication

WORK EXPERIENCE AND TRAINNING:

- Working at Indian Institute of Technology, Hyderabad (IIT-H) as a project assistant since January 2013.
 - Laboratory: Cyber Physical Systems (CPS) lab.

Worked on **front end design** pertaining to Electrocardiogram (ECG) signal boundary detection. **Boundary detection in ECG** signal refers to identification of each frame containing fiducially important points like **P**, **Q**, **R**, **S**, **T**. The code was developed using MATLAB as a proof of concept with low complex signal processing methodologies. Later the code was implemented in Verilog so as to realize in hardware. Synthesis of these codes was performed in **Cadence RTL compiler**. Targeting ASIC, the **physical design** of the Boundary detection code is be expected to carry in **Cadence SOC encounter** or **Synopsys IC compiler**. The RTL verification was exhaustively performed on ECG signal databases like MIT-BIH, CSE database and also on 30 real-time patients ECG data, as a matter of sanity check. On completion of RTL verification this work is expected to submit in **IEEE transactions biomedicine** (**TITB**) **journal**.

- In addition to the above work, I was also involved in "Adaptive Rule Engine based IOT Enabled remote health care Data Acquisition and smart transmission system" whose primary goal is to comment on condition of patient. It is an automated way to classify whether the ECG signal is normal or abnormal and communicate the abnormal signal to the base station. This work was submitted to conference EDAS, WF- IOT 2014 and was accepted on 16th of December 2013.
- Training at Synopsys, Hyderabad which is an Electronic Design Automation (EDA) tool design company: Our team was trained on the EDA tools like Symphony C Compiler, Design Compiler and IC Compiler. We got well acquainted to the basics of Synopsys IC flow.
- Apart from technical experience, I also worked in **Ushodaya Constructions** as a **marketing manager** for few months, which enabled me to possess marketing skills.
- Attended a workshop on "Cyber-Physical Systems," held at IIT Hyderabad conducted by IIT Hyderabad. During the workshop our team developed a low cost low power ECG machine targeting its deployment in rural areas. In addition, I also volunteered for hospitality of the honourable speakers who attended the workshop.
- Got selected in Tata Consultancy Services (TCS) as part of campus recruitment in SRM University. In addition, I was
 ranked among top 1 percent in national level examinations like IBSAT (ICFAI B-School). But the interest in VLSI had
 driven me to pursue my carrier in VLSI based core environment.

PROJECTS:

 Low Power error tolerant adder (ETA): Was aimed at its deployment in any devices with low power requirements in Digital image Processing domain. At product level the possibility of its usage could be in digital cameras with considerably high resolution. The RTL was developed in Verilog. Functional verification was performed in Sparten3E FPGA. The image size was calculated before and after applying the algorithm, this technique lead the image size reduction to its original by 50 percent.

(Technologies: Matlab, Mentor Graphics ModelSim, Xylinx ISC)

- Stress Detection and Measurement: It was technical project in IIT-H under my guide Dr.Amit Acharyya. We explored various options in analysing stress from several physiological signals that are captured from Electrocardiogram, Electrocencephalogram, Electrococulogram, etc;
- Criticality Alarm System (CAS): Was part of live project in Electronics Corporation of India Ltd., The functionality of CAS is to detect and monitor radiation levels in nuclear reactors. This device has a detector in which the inert gas gets ionized based on the extent of radiation from the radioactive material. This is a safety system which generates an alarm when radiation leaks from reactor. (*Technologies*: SCADA)
- Programmable Logical Controlling (PLC): Trained in PLC coding which is useful in operating computer numerically controlled machines. It is consists of list of command to operate very big machines involved in defence applications and large scale product manufacture divisions.
- CNC machining (CNC): Was trained in CNC machining in Ordnance Factory Defence. Training of CNC machining
 was aimed to familiarize ourselves with the tools involved in manufacture of vehicles for defence applications, a
 study on inter vehicular communication was also part of the programme.

EXTRA CURRICULAR ACTIVITIES:

- Was elected to the post of Secretary, Games & Sports Society, SRM University (Academic Year 2011-2012).
- Participated in several Blood donation camps conducted by Lions blood bank and Chennai Corporation AIDS Prevention and Control Society
- Member of Technical Team which developed Alumni website and Alumni Directory for SRM University.
- Member of Aarush, Stringz and Aurganon which are technical fests conducted in SRM University 2010-11.
- Attended several workshops on Robotics, Linux, python and Virtualization of Operating Systems conducted in SRM University.
- Organising Team, International Conference on Communication and Computing 2011 held at SRM University in September 2011.
- Core Committee Member, Student Executive Council in high school (Academic Year 2005-2006).
- Participated and won in several literary competitions like essay writing and elocution at school level.
- Among top 10 percent in **State** and **National Level Talent Search Examinations** throughout the school.