Krishna Savant Syreddy **100070056**
Electrical Engineering **UG Third Year(B.Tech)**
Indian Institute of Technology, Bombay **Male**
DOB: 19-06-1993

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	8.59
Intermediate/+2	BIE, AP	SR Junior College	2010	90.50
Matriculation	CBSE	Warangal Public School	2008	93.00

Research Interests

- Digital Electronics, VLSI Design, High Level Synthesis
- Robotics, Artificial Intelligence (Planning and Localization)

Current Projects

- **AUVSI Robosub 2013, Sandeigo, CA** *(September 2012 to Present)*
  Designing and developing an unmanned autonomous underwater vehicle (AUV) that localizes itself and performs realistic missions based on feedback form visual, inertial, acoustic and depth sensors using thrusters/propellers [`http://auv-iitb.org`]
  - Working with the software sub-division on localization and navigation of the vehicle by fusing various sensor data using kalman filtering and updating the motion controller
  - Using ROS (Robot Operating System) architecture to integrate several parts of the system
- **High Level Synthesis using Legup** *(Guided by Prof. S. Patkar, September 2012 to Present)*
  Working under High Power Computing Lab, EE Dept. on HLS to implement a memory model using stacks or queues to improve the synthesis of specific applications with regular and iterative algorithms to hardware Building up on legup infrastructure to analyze different high level techniques

Google Summer of Code - GSoC'12

Worked on the project **Gnucap plugin for schematic files** *(May 2012 to August 2012)*

- Worked with the organisation 'GNU Project' on the project 'Gnucap' (GNU Circuit Analysis Package) under the mentorship of Albert Davis. [`http://gnucap.org`]
- My work involved the following :
  - Reading through the existing codebase to understand it
  - Figuring a way to map schematic file to Verilog-AMS and vice-versa
  - Implementing a plugin which will import a schematic file and convert into a Verilog-AMS netlist and also export an existing circuit in schematic format

Academic Course Projects

- **Technology Mapping - VLSI CAD** *(Guided by Prof. S.Patkar, EE677 - Autumn 2012)*
  - Modeling the problem of technology mapping as a tree covering problem using pattern trees of the library gates.
  - Implementing using python graph-tool library

- **Traveling Message Display** *(Guided by Prof. M.B.Patil and J.John, EE214- Spring 2012)*
  - Worked in a team of 3 members
  - Display a scrolling message taken using keypad on an LED Array
  - Used an FPGA board: DE0 NANO and programmed using Verilog-HDL
  - My work involved writing verilog modules for taking input from the keypad and processing
- **Simulation of Micromouse** *(Guided by Prof.Deepak B. Phatak, CS101 - Autumn 2010)*
  - Led the team of 12 members.with 3 subteams of 4 members each
  - Designed n×n mazes, Solved them for the shortest path using Bellman-ford algorithm in C++ and Simulated the solution using EzWindows GUI.
  - My work involved programming the display over GUI and interlinking the different parts

Scholastic Achievements

- **All India Rank 61** in IT-JEE (Joint Entrance Examination) - 2010 of 0.455 million students
- Awarded **Certificate of Merit** by Central Board of Secondary Education (**CBSE**) for being among **top 0.1 %** in 'Science' and 'Social Science' in All India Secondary School Examination - 2008.
- Secured **AIR 15** in 10th National Science Olympiad (NSO) - 2007 conducted by Science Olympiad Foundation(SOF).

Technical Skills

- **Programming Languages**: C++,Java,Python,Ruby **Operating Systems**: Ubuntu, Windows
- **Tools**: Latex Scilab, Mathematica , Photoshop **Web development**: HTML, CSS, JS, Django
- **EE tools**: ngspice, gnucap, gEDA tools, Eagle, Verilog-HDL, Verilog-AMS, Icarus verilog Bluespec System Verilog (BSV), Modelsim, Altera Quartus

Technical Activities

- Yahoo! HackU -2012: Built an android app and web interface, 'MapIt' which can be used to create customizable maps of localities with greater information
- Line-follower competition-2011 : Designed and built a line-following bot using IR sensors and coding the microcontroller using Arduino software
- Trackmania-2010 : Built a remote-controlled four-wheeled car (bot).

Extra Curricular Activities and Achievements

- Participated in **Unnati**, the **NSS** (National Service Scheme) group of IIT Bombay.
  - Has been involved with the **GRA** (Group for Rural Activities) as part of curriculum in I year
  - Went to Village trips in Autumn 2010 and Spring 2011.
  - Continued as a voluntary member of the NSS Team in the subsequent year.
- Worked as 'Organiser' in **Techfest-2011** in the Lecture Series department.
- Participated in the Inter-hostel Hockey GC.

Additional Courses taken / currently taking

- Foundations of VLSI CAD
- Artificial Intelligence
- Data Structures and Algorithms
- Discrete Structures
- Introduction to Quantum Mechanics
- First Course in Optimisation