

Vinaykumar S. Hegde

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Education	University of Southern California, LA Master of Science in Electrical Engineering Courses completed: Linear Algebra, Probability Current courses: Pattern Recognition, Robotics, Co-ordinated Multi Robots, Linear Systems theory Online Courses: Machine Learning (Coursera)	May-2016 GPA: 4.0/4
	Rashtreeya Vidyalaya College of Engineering (RVCE), Bangalore BE in Electronics and Communication Engineering	Jun-2011 GPA: 9.13/10
Experience	Digital Design Engineer Texas Instruments, India	Jul 2011- Jul 2014
	<ul style="list-style-type: none">Designed and characterized Standard Cells for TI's processes.Instrumental in automation and flows setup for characterization and simulations of standard cells.Designed Python based web-server for Digital Design Margin Calculator.Designed synthesis experiments and checkers to validate standard cells. Played a key role during tool transitions.Developed device drivers and Wiring modules in early stage development process of Aurava (Arduino equivalent for MSP430).Co-authored a paper on "Surprise or Shock? Transistor level functional analysis of digital circuits and systems are still needed!" This was awarded best paper at CDN live 2014, India.	
Projects	Avionics Project	Aug 2010 - May 2011
	<ul style="list-style-type: none">Worked as a Student Avionics Engineer for Project Vyoma. Project Vyoma is a premier aeromodeling and Unmanned Aerial Vehicles (UAV) project at R.V.C.E Bangalore, which has won several SAE awards and NASA System Engineering Award.Developed IMU sensors interface/device drivers for LPC2148.Designed control and stabilization algorithm for quadcopter using PID control loops and inertial sensors (Accelerometer and Gyroscope) on LPC2148 ARM controller.Worked on design of wireless video transmission system for UAVs. Developed 24fps QVGA video transmission system using OMAP3, Embedded Linux and WiFi.Designed data acquisition system and radio transceiver for Unmanned Aerial Vehicles with LabView GUI. Implemented long range radio communication using ZigBee.Worked on Paparazzi Auto Pilot system for Unmanned Aerial Vehicles.Presented a paper on "Design of quadcopter with closed loop control system" at Visves-	
	Student Satellite Project	Feb 2008 - Jun 2009
	<ul style="list-style-type: none">Worked as a student member in India's first student pico-satellite project. Contributed to onboard computing system design for communication subsystem.Developed device drivers for CC1020/CC1070 transceivers on Atmel AVR32-32 bit micro-controllers.Simulated bit error rate in space using Simulink/Matlab.Implemented trimmed down version of AX.25 communication protocol stack on AVR32 for satellite communication.Listed in Limca Book of Records (2011) for being member of India's smallest satellite project and represented project in World Space Expo-2010	
Skills	Programming Languages: C/C++, Python, Perl, 8086/AVR/ARM Assembly, Verilog, MATLAB Operating Systems: Windows, Linux and Mac OS X. Web Technologies: HTML, CSS, sqlite/MySQL, CMS (Joomla and Wordpress)	