Samarth Jain

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Education

- **Hong Kong University of Science And Technology** Hong Kong
  MSc Electronics *2018*
  - Subjects: Embedded Systems , Analog Circuits Design , CMOS

  R V College of Engineering Karnataka, India
  B.E in Telecommunication Engineering: CGPA: 8.2 *2014 – 2018*
  - Key Courses: HDL implementation on FPGA, Analog circuits design , Network Analysis and Control Theory , Embedded Systems programming , MIMO and Wireless systems , Networking , Microprocessors And Microcontroller, Signal Processing

Experience

- **Indian Institude of Science (IISC)** Bengaluru
  Training *Jan. 2018*
  - Internship in control system and analog electronics at Indian Institude of Science , Bengaluru , India
  - Design of analog circuits like DC DC converters and digital control strategies
  - Development of a two output buck converter for 60V input to 15V and 18V output
- **Project Garuda** Bengaluru
  Electrical Subsystem *Jan. 2015 – 2016*
  - Design of a 3 phase inverter for BLDC motor control and implementation of digital control system
  - Controller was manufactured and tested on self made electric vehicle
- **Hyperloop India**
  Auto Pilot using MATLAB *Jan. 2016 – 2017*
  - Design and Simulation of high speed levitating train auto pilot using Simulink and MATLAB
  - Implemented the auto pilot on actual levitating train at Hyperloop competition held by SpaceX and represented India as Hyperloop India student team.
  - Development of electronic eddy braking system using actuators like stepper motors
- **4*4 Tic Tac Toe**
  Android Application Development *Jan. 2016*
  - Development of a new game using android as a platform for smart phones
  - The game has new architecture and rules.
  - Code was developed on android studios and implemented on actual smart phone

Skills

Languages: Android, VERILOG, C/C++ implementation on microcontrollers , Assembly language programming, HTML

Manufacturing Skills: double sided PCB routing

Tools: Android Studios, KiCad for embedded circuits(OPEN SOURCE), MATLAB and Simulink for algorithm development

Academic Projects

- **3 Phase Motor Controller For Commercial Electric Vehicle**
  Academic Project *Jan. 2015 - Sep. 2016*
  - Developed a **Brushless DC Motor controller** for electric vehicles
  - Implemented a novel design for above using Power MOSFET, logic gates and ATMEGA32 , including self made mosfet driving circuit
  - Achieved simpler, efficient and lower cost design of a 3 Phase 6 step Trapezoidal controller
  - Design verified by rigorously testing on an self designed vehicle
- **DC Motor Controller For Commercial Electric Vehicle**
  Academic Project *Jan. 2017 - Sep. 2017*
  - Implementation of a **DC Motor controller** for high power and current application .
  - Self made design of power stage and driving stage of power mosfets.
  - Use of forced cooling to operate controller to its peak power.

Achievements

- Initiated and designed **STAND ALONE SOLAR POWER PLANT** for Project Garuda
- Member of Hyperloop India, a multicampus student team comprising of students from RV college,BITS Pilani **THE TEAM** is curently making Indias first Hyperloop.
- Member of Project Garuda, Student electric vehicle team.The team now makes urban concept vehical motorcontroller and has completed endurance at an international event, **SHELL ECO MARATHON** held at Singapore March 2017
- Secured 1st position in the state of Delhi and 19th Position nationally at the National Math Olympiad 2012