PRATIK RAVIKUMAR SANGHAVI

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EDUCATION

BITS Pilani, K.K. Birla Goa Campus — Goa, India
*Bachelor of Engineering in **Electronics and Communication** and Minor in **Finance**; GPA: **8.86/10*** — *2017- Present*
*Department Rank **14** out of 108 students*

Pace Junior Science College — Mumbai, India
*Intermediate/+2: **92.15**%; Among the **top 1%*** — *2015- 2017*
*JEE Advanced **All India Rank 8708** out of 1.4 million candidates*

Activity High School — Mumbai, India
*Matriculation: **95.4**% (ICSE)* — *2015*

SKILLS

- **Languages**: C, Java, Verilog, x86 Assembly, Unix Shell Programming
- **Software Packages and Frameworks**: MATLAB, Cadence Virtuoso, Arduino IDE, AutoCAD, CST Studio Suite, Quartus Prime, MS Office

INTERNSHIP EXPERIENCE

- **Electronics Intern** : *Indira Gandhi Centre for Atomic Research ,Kalpakkam, India* — *Summer 2019*
  - **Implementation of noise suppression** techniques for **multi-channel analyzer** in an **FPGA based system**.
  - Undertook a comparative study of various **possible digital filters** for the given system. Used **MATLAB** to simulate the filter response to the data collected from the **MCA** in the Plutonium Continuous Air Monitoring System.
  - Generated **VHDL code** for a suitable candidate.
- **Summer Research Intern**: *Cateina Technologies, Mumbai, India* — *Summer 2018*
  - Worked with **Arduino UNO** to realise a **temperature sensing** device for collection and transmission of data to a server
  - Used **Hyperledger Composer** to build a **Blockchain** network to store the data obtained by the temperature sensor

PROJECTS

- **Temperature Sensing Blockchain prototype** : — *May 2018 - July 2018*
  - Developed a prototype suitable for **cold chain management applications** enabling real-time acquisition and transmission of temperature data.
  - Used **Arduino UNO**, ESP8266 WiFi Module, DHT22 Temperature Sensor and **Hyperledger Composer**
- **RAM tester**: — *Mar 2019 - Apr 2019*
  - Designed a **RAM tester** for checking the functionality of a given RAM module by storing bits into and retrieving bits from all locations on the module.
  - Used **Intel 8086** for this project and used Assembly Language to code the microprocessor.
- **Noise Suppression for Multi Channel Analyser**: — *May 2019 - July 2019*
  - Conducted an in-depth study of a **Continuous Air Monitoring System** and stimulated and implemented a suitable **digital filter** to improve the **ENOB** of the system for more accurate detection of **low amplitude signals**
- **Haze Removal from Images**: — *Oct 2019 - Nov 2019*
  - Implemented a **MATLAB code** for "A Fast Single Image Haze Removal Algorithm Using Color Attenuation Prior."-an existing paper on haze removal.
  - Involved **construction of a depth map**, **estimation of atmospheric light** and **scattering index using empirical and machine learning models**.
- **Antenna Design for government and military communication**: — *Oct 2019 - Nov 2019*
  - Designed a **microstrip patch antenna spanning a bandwidth of 7-14 GHz using the CST Studio Suite, antenna workflow**

RELEVANT COURSEWORK

- **Electronics and Communication**: Analog and Digital VLSI Design, Digital Design, Microprocessors and Interfacing, Microelectronic Circuits, Electrical Machines, Electronic Devices, Electromagnetic Theory, Signals and Systems, Control Systems, Digital Image Processing, Digital Signal Processing, Communication Systems, Electromagnetic Waves and Microwave Engineering, Communication Networks*, Computer Architecture*, Information Theory and Coding*, Analog Electronics*, Introduction to FPGA Design for Embedded Systems(University of Colorado, Boulder)
- **Computer Science ,Data Science**:Object Oriented Programming(UC San Diego), Machine Learning (Stanford University)
- **Finance**: Fundamentals of Finance and Accounting, Equity Portfolio Management(NSE Academy Limited), Financial Management*

**to be completed by May 2020*

POSITIONS OF RESPONSIBILITY

- **Creative Head- Department of Arts and Deco.**: — *Aug 2019 - Apr 2020*
  - Headed the production of the **induction video** for the department.
  - Conducted **brainstorming sessions** for finalising ideas to be executed for fests in college.

ACADEMIC ACHIEVEMENTS

- Stood **second** in the Network Management Course organised by Nettech in the college

EXTRACURRICULAR ACTIVITIES

- Secured "**A**" **grade** in both the **elementary and intermediate drawing examinations** held by the Government of Maharashtra.
- Secured "**Pratham Shreni**" or "First Class" in the four year course in **Indian Classical Music (instrument -keyboard)** recognised by the **Gandharva Mahavidyalaya(Ahmedabad)** under the tutelage of Shri Ranjit Kapadia.
- Received **Karate** and **Judo** training from Sensei Shihan Jahangir Shroff with a brown and blue belt respectively in these disciplines. Also participated in numerous city and state level competitions in karate (kumite as well as kata).
- Awarded "**Best Delegate**" at an **MUN** organised at PACE Junior Science College, Dadar