

# PRATIK RAVIKUMAR SANGHAVI

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## EDUCATION

### **BITS Pilani, K.K. Birla Goa Campus, Goa, India**

Secured Bachelor of Engineering in Electronics and Communication with *Distinction*

**August 2021**

**(CGPA: 9.05/10)**

## PROFESSIONAL EXPERIENCE

### **Quantiphi Analytics Solution Pvt. Ltd, Mumbai, India**

**September 2021 - Present**

*Machine Learning Engineer*

- Working on a solution to optimize the warehouse operations of the Coca-Cola bottlers using computer vision techniques of detection, classification and tracking.

### **Apple India Pvt. Ltd, Bengaluru, India**

**January 2021 - July 2021**

*Control Plane Developer Intern - Wireless Technologies and Ecosystems*

- Ensured data continuity in handover and redirection scenarios between the LTE and NR RATs in the various modes of connectivity.
- Identified and fixed several bugs as part of the project by examination of the logs generated as a result of running the code with changes over the testcases.
- Simplified the analysis of logs generated as part of the testing processes by developing an internal tool for generating message flow diagrams as well as providing a functionality to filter messages.

### **VKS Computer Services, Mumbai, India**

**July 2020 - December 2020**

*Data Science Intern*

- Scrapped and cleaned data off a Chinese OTT platform and augmented it with data from IMDB to make the data suitable for further processing. Designed the database for a language institute also offering in-house placements.
- Employed Natural Language Processing for inferring the contexts of emails as well as named entity recognition to help a career counselling service to automate their workflows.

### **Indira Gandhi Centre for Atomic Research, Kalpakkam, India**

**June 2019 - August 2019**

*Research Intern*

- Implemented noise suppression techniques for the multi-channel analyser in an FPGA based system.
- Performed a comparative study of the possible digital filters for the given system to arrive at an optimal filter design for the given application within the set constraints.
- Effected MATLAB to simulate the filter response to the data collected from the MCA in the Plutonium Continuous Air Monitoring System and generated VHDL code for a suitable candidate.

## ACADEMIC PROJECTS

### **Verilog implementation of rudimentary pipelined processor**

- Designed and simulated 4 stage pipelined processor to execute a subset of the RISC-V ISA on Verilog and synthesized a functional model on Quartus Prime.
- Implemented datapath including control unit, instruction memory, register file and ALU using Verilog from scratch and successfully simulated on ModelSim.

### **Haze Removal from Images**

- Incorporated MATLAB code for "A Fast Single Image Haze Removal Algorithm Using Color Attenuation Prior."-an existing paper on haze removal.
- Constructed depth map, estimation of atmospheric light and scattering index using empirical and machine learning models in order to implement the dehazing algorithm detailed in the paper.

### **RAM tester**

- Developed a RAM tester to check the functionality of a given RAM module by storing bits into and retrieving bits from all locations on the module. Employed Intel 8086 and used Assembly Language to code the microprocessor.

## TECHNICAL SKILLS –

- Languages: C, C++, Python, HTML, CSS, JavaScript, Unix Shell Programming, Verilog, x86 Assembly
- Software Packages and Frameworks: MATLAB, MySQL, Cadence Virtuoso, Arduino IDE, AutoCAD, CST Studio Suite, Quartus Prime

## EXTRA CURRICULAR ACTIVITIES

- Headed the brainstorming sessions for finalizing ideas for festivals at BITS Goa, produced induction video and oversaw the progress of the department in varied projects as the 'Creative Head' of the Department of Arts and Decor from 2019-2020.
- Achieved second place in a Network Management Workshop in 2019 organized at BITS Goa.
- Participated in a 4 month long "Equity Portfolio Management" Workshop in 2018 organized at BITS Goa and cleared the National Stock Exchange examination on "Equity Portfolio Management" securing 81%.