RISHAV SINGH

VLSI enthusiast eager to contribute to team success through hard work, attention to detail and excellent leadership skills. A thorough understanding of FPGA, Linux and OS related technologies. Comprehensive knowledge of Data Structures and Algorithm Concepts.

CONTACT

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Rishav Singh
Rishav's Blog

SKILLS

Programming Languages
C, C++
Python
Bash
Dart

Hardware Languages
Verilog HDL

Technologies
Robot Operating System
8086 Microprocessor
Risc V
React
Django
Flutter
Firebase

Software & Tools
Scilab
Ltspice
Keil µVision
Yosys
Proteus, Multisim
Docker
Git

Operating Systems
Ubuntu, Arch Linux
Windows

CAD Tools
Quartus
Modelsim

EDUCATION

B.Tech. in Electronics & Communication Engineering
CGPA - 8.65/10
July 2019 - May 2023
Dharmsinh Desai University, Nadiad

HSC (GHSEB)
PR - 80.9/100
June 2019
Shree P. V. Modi School, Jamnagar

INTERNSHIP EXPERIENCE

Intern at eYantra, IIT Bombay
May 2021 - Jul 2021
Bombay
- Optimized auto evaluation tool for working on Linux kernels
- Created unified platform and connected Django backend with Vue frontend and automated dynamic docker container generation on submission and result evaluation based on each theme requirement

EXTRA EXPERIENCE

Tech Lead at Abhiyanta Community
Sep 2020 - Current
Nadiad
- Mentored at project based learning platform by adding value through training and motivating innovators
- Instructor for explaining the concepts of Robotics, Robot Operating Systems, Linux, Git and Embedded Systems

Associate Developer at DDU Connect
May 2019 - Current
Nadiad
- Created a team of developers for DDU Connect's official website and Android Application

PROJECTS

Vitarana Drone
Oct 2020 - Feb 2021
link
Technology: Python, ROS, Drone, Gazebo, Git
- Used Robot Operating System(ROS) for Autonomous Drone based delivery system in a simulated environment
- Learned about team management and task division and distribution for achieving larger goals

Industrial Surveillance Robot on FPGA
Jan 2022 - Mar 2022
link
Technology: Verilog, FPGA, Quartus
- A FPGA based robot simulation for measuring the important industrial parameters using different sensors
- Armed with IoT gate way to analyze the required parameters

IoT based Hydroponics(Govt. Granted)
Apr 2022 - Jun 2022
link
Technology: C++, Flutter, Firebase
- A Gujarat government granted(SSIP) project to modify hydroponics based farming system with IoT in order to improve quality of soil less farming
- Connected the hydroponics plant to the cloud server for data storage and control through flutter android app

Linux Kernel Configuration
Jun 2021 - Jul 2021
link
Technology: OS Components, Linux, Shell Scripting
- Configured Linux kernel for better power consumption, security and performance

UART using Verilog

Oct 2020 - Nov 2020
link

Technology: Verilog, Quartus

- Implemented UART transmitter and receiver using verilog
- Wrote test-bench verification code to verify UART protocol working

ACHIEVEMENTS

- **Led** the team to pre-finals round in eYantra Robotics Competetion and were in **top 20** among **2603 teams of 572 colleges** all over the globe
- Grade B in e-Yantra Embedded Mooc 2021
- Campus Ambassador at eYantra, IIT Bombay
- Winner of Code-e-Fest Competition in DDU annual festival (2021)

COURSES

- VLSI SoC Design using Verilog HDL - Maven Silicon
- Embedded Systems and Robotics Mooc - eYantra IIT Bombay
- Practical Linux for Network Engineers - Udemy

OTHER PROJECTS

Px4 autopilot drone simulation using ROS

Nov 2021 - Dec 2021
link

Technology: Robot Operating system, Python, Bash

- Achieved autopilot control for traversing the drone
- Connected the simulation environment with QGroundControl application using ROS

Crypto and Stocks Analysing Bot

Oct 2021 - Nov 2021
link

Technology: Django, Redis, Docker, TALib

- Realtime data fetching and applying technical indicators on selected symbols
- Backtesting of custom strategies and displaying result on charts

Abhiyanta Community Website

Jul 2020 - Oct 2020
link

Technology: React, Git, Github, Firebase, CI/CD

- Learnt to host the website on firebase
- Used github for automation and continuous deployment

Personal Website using bash and markdown

Mar 2021 - Apr 2021
link

Technology: Bash, Markdown, Git, Github, CI/CD

- Achieved the goal of a minimal static site generator using bash and markdown files
- Automated CI/CD with github actions and hosted on github-pages

Jellyfin Media Server using resberry-pi3

July 2022 - Aug 2022

Technology: RespberryPi

EXTRA-CURRICULAR ACTIVITIES

- Technical blog and documentation writing
- Tweaking linux desktop environments