

Charvi Mendiratta

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Education

Uiet, Panjab University

B.E IN ELECTRONICS AND COMMUNICATION

GPA: 8.15

Chandigarh, India

2016 – 2020

Experience

Open Source Contributor

Git

- Working on Git project, implementing the new "drop!" commit feature.

Remote

Oct 2020 - Present

Outreachy Intern, Git

Git

- Improved the test scripts and modernized it. Worked on implementing the new "amend!" commit feature in the Git interactive rebase [Work Link].

Remote

Dec 2020 - March-2021

Black Coffee Robotics

ROBOTICS SOFTWARE INTERN

- Worked on Robotics Software development for the indoor mobile robots. My day to day work includes the simulation, testing, development and research. I primarily worked on building ROS2 packages for communication on top of ROS1 packages. Also I worked on implementing the navigation stack and other multiple SLAM packages in the simulated factory world. Besides this I also did major work in localization.

Hyderabad, India

Jan 2020 - July-2020

Summer Intern at JMOON LAB

ROBOTICS SOFTWARE DEVELOPER

- Worked on Turtlebot3 from scratch. Implemented the SLAM and Navigation Packages of ROS on Turtlebot3 and also build the package for the teleoperation of the Multiple Turtlebot [Work Link].

New Delhi, India

June 2019 - July-2019

Tinkering Projects for NGO

STUDENT LEAD

- Design and Build several Product based Tinkering projects under the college-industry partnership program. Managed over 20 team members and successfully build and designed the commercial products which are all ESP8266 and Arduino based tinkering projects for the NGO and are used to showcase these in the schools for encouraging the secondary students [Code Link].

Chandigarh, India

October 2018 – January 2019

Design Innovation Centre (Water Surface Vehicle Project)

SUMMER INTERN

- Worked on the water boat which is intended to be used for monitoring lakes and other small water bodies. Build the remotely operated version. Sensor interfacing using arduino and wireless communication using nrf modules [Work Link].

Chandigarh, India

May 2018 – July 2018

Embedded group of Uiet

COMMUNITY HEAD

- Initiative to develop open source electronics and Robotics environment, where all can share their projects, queries and can get aware about new technologies. Regularly organise different workshops and seminars on different topics related to electronics. Also organised the Hardware hackathon on the North India Level [Link].

Chandigarh, India

2017 – Present

Skills

Programming Languages: Python, Embedded C, C, C++, Shell Script

Software: ROS, Gazebo, Linux, Git and Github, OpenCv, Pspice, Fritzing

Hardware: RaspberryPi, Arduino, AVR mC, 8051 mC

Projects

Tele-op Surveillance Bot

ROS, RaspberryPi, Arduino, OpenCV

BUILD THE KEYBOARD OPERATED BOT USING ROS. SETUP THE LAPTOP AS BASE STATION AND WIRELESS COMMUNICATION VIA KEYBOARD. USED ARDUINO UNO AND RASPBERRY Pi (CAMERA ATTACHED) FOR THE SURVEILLANCE.

[Video Link](#)

The Ant Bot

*RaspberryPi,Nano,
I2C,OpenCv,Electronics ckt,Robotics*

BUILDING ANT BOT FROM SCRATCH THAT INCLUDES LINE FOLLOWING USING SENSOR,CLOUR IMAGE PROCESSING AND ANT HILL DETECTION AND SERVICE ASSESSEMENT USING CAMERA CORRESPONDING TO THE DATA EXTRACTED FROM ARUCO MARKER. ALSO THERE IS PICK AND PLACE MECHANISM.

[Video Link](#)

Password Based Security system

8051 mC, Keypad and LCD interface

DESIGNED THE PASSWORD BASED SECURITY SYSTEM USING 8051 MC WHICH CAN BE USED AS A SECURITY CHECKING SYSTEM TO LIMIT ACCESS TO AN AREA ONLY FOR CERTAIN INDIVIDUALS WITH THE PASSWORD. INTERFACED LCD AND KEYPAD WITH THE CONTROLLER.

[Video Link](#)

Age and Gender Detection Estimation

Python,keras,opencv

PREDICTING THE AGE AND GENDER USING CONVOLUTION NEURAL NETWORK ON IMDB DATASET.

[Code Link](#)

Achivements

- Sept 2018 , Qualified the QuaterFinal round of the Texas Instruments IICDC 2018.
- Feb 2019 , Poster Presentation on Line Following Algorithm using FSM at CHASCON-2019.
- July 2019 , Smart India Hackathon (Hardware edition-2019) Winners for Problem Statement : Tracking Board for Unsafe Acts.
- Oct 2019 , ROSCON Diversity Scholarship Awardee 2019.