SURBHI KUMARI

Robotics and IoT Enthusiast

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EDUCATION

Bharati Vidyapeeth's College of Engineering

B.Tech in Electronics and Communication

August 2017 – Present New Delhi, India

CGPA = 9

S.S Mota Singh Model School

High School

April 2015 – March 2017 New Delhi, India

Perctange= 95.4%

SKILLS

C, C++, Python, Unix, Linux
Arduino, Raspberry pi
IoT, Sensor Networks, Communication
3-D Modelling, Simulation Softwares(V- Rep)
Blender, Unity

EXPERIENCES

Embedded Systems Intern

Aerogram Pvt. Ltd. (IIT Delhi)

Aug 2019 – Dec 2019 New Delhi, India

- Worked on building a network of air pollution monitoring devices including PM sensor modules, wifi, Communication protocols .

Vice - Chairperson

Robotics and Automation Society, IEEE

July 2019 – Present New Delhi, India

- Responsible for leading the team, gear up robotics environment in college.

Chapter Representative

Robotics and Automation Society, IEEE

July 2018 – July 2019 New Delhi, India

- Engage with student and make them aware of robotics field and hold various technical events.

Trainee

Defence Research and Development Organisation

June 2019 – July 2019 New Delhi, India

- Trainee at Defence Research and Development organisation under Solid state Physics Laboratory studied on Semiconductor and Metal Contacts.

ACHIEVEMENTS

- Winner of Smart India Hackathon Software Edition 2019 conducted by MHRD (Ministry of Human Resource and Development)
- Winner of Smart India Hackathon Hardware Edition 2019 conducted by MHRD (Ministry of Human Resource and Development)
- Winner of Hardware Productathon Conducted by IIT Roorkee
- Finalist(One of the top 5 teams) at E-Yantra Robotics Competition 2019-2020 conducted by IIT Bombay

PROJECTS

Rocker Bogie Mechanism Robot

- Rocker Bogie Robot that can traverse on multi terrain surfaces due to its highly stable suspension design.

Travel YaAR

- An AR (Augmented Reality) app that shows user the view of various stadiums in AR view so that they select the seats as per their choice enhancing user experience while traveling.

Nurse Joy

- A Smart ICU Robot to assist nurses in their daily tasks like lifting the patients and giving them bath by mimicking the action of nurses.

Nutty Squirrel

- A robot mimicking the behaviour of a squirrel. The robot picks the nuts, follows a shortest path algorithm and places it at a position specified. It was one of the themes in E-Yantra Robotics Competition held by IIT Bombay.

Sensor Network for Accident Prevention

- Built a sensor network to prevent accident using LoRaWAN. A device first detects the factors that lead to accident and then using LoRa protocol, alert is sent to the nearby vehicle drivers as well as the vehicle driver who might get hit.

Biped Patrol

- A self balanced bot to deliver medicine boxes and first aid kits to victims of natural calamities. LQR control system/algorithm was used to balance the robot to prevent manual tuning required in PID Controller.

Newtons Cradle

- Simulation of Newton's Cradle in Unity, followed by an AR view of the same. The cradle's model was made in blender.