SHIVAM JAISWAL

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नमस्ते शारदे देवी काश्मीरपुरवासिनि
त्वामहं प्रार्थये नित्यं विद्यादानं च देहि मे॥

Skills

- C/C++
- Python
- ROS
- Docker
- MATLAB
- Simulink
- Solidworks
- Siemens NX
- AutoCAD
- OpenSim
- MSC Adams
- Embedded System
- GitHub
- Raspberry Pi
- Sensor Fusion

Languages

- Hindi
- English

Education

School
High school
Senior Secondary School

Jagran Public School (2011-2014)
9.2/10 in year 2012
82.5 % in year 2014

Mechatronics
Bachelor of Technology

Manipal University (2015-19)
8.45/10 in year 2019

Robotics
Master of Technology

Defence Institute of Advanced Technology-DRDO (2020-22)
8.37/10 in year 2022

Projects

Robotic Arm
2017 (Ended)

Six Degree of Freedom arm Manipulator
To demonstrate forward kinematic for pick and place use using potentiometer.

3D Printer
2020 (Ended)

Fused Filament Fabrication, 3D Printer.
3D printer for personal use, using Marlin1.1 code.

Path Planning
2021 (Ended)

Path planning using D* Algorithm
Generating shortest path between two points with MATLAB.

Robotic Arm
2021 (Ended)

Four Degree of Freedom arm Manipulator
Simulation and Analysis of 4-Dof Manipulator in Adams.

Exoskeleton
2022 (Ended)

Cable-driven upper body exoskeleton
Simulation and control of cable-driven exoskeleton to provide assistance at elbow joint for weightlifting task.

Experience

CSIR-CSIO
2019 (Ended)

Surgical Robotic Systems
6-month Project Trainee on 2R arm manipulator.

CAIR-DRDO
2021-22 (Ended)

Simulation and control of Exoskeleton
10-months Project training on simulation and control of upper body exoskeleton for elbow assistance in weightlifting.

Agnikul Cosmos
2022 (Ended)

Space Silicon Engineer - Intern
2.5 month - Worked on **Ni-PXIe HIL system** and Embedded system with **POSIX- IPC** handling.

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Learning

Artificial Intelligence

Cocurricular

Photography

Photoshop

Cooking

Travel

Sports

Badminton

Table Tennis

Swimming

Chess

Strengths

Logics

Understandings

Creativity

Analysis

Strength to subdue weakness

Passionate to learn new things

Competitions

Microprocessor
2020-21 (Ended)

Swadeshi Microprocessor Challenge
To Use Made in India microprocessors for an application

Toy hackathon
2021 (Ended)

Toy hackathon by Government of India
To design toys based on Indian culture and education

AIM
2021 (Ended)

AIM by NITI Aayog, Government of India
Generating shortest path between two points with MATLAB.

Innovator 1.0
2021 (Ended)

Periyar U. Business Incubation Confederation
(Swachh Urjja: A Piezoelectric Way) Light up and control streetlights using Piezoelectric Material.

Robotic
2021 (Ended)

ARTPARK Robotics Challenge by IISc
Building a Mobile Manipulator Robot to clean Bathroom, made it to as top 30 teams all over India.

Publications

Path Planning
Elsevier-ScienceDirect

IFAC-ACODS-2022
https://doi.org/10.1016/j.ifacol.2022.04.128

Exam

Gate

Computer Science and Information Technology
Qualified Gate exam in Computer science in 2019 and 2020.

NPTEL

Hardware Modelling using Verilog.
Parallel programming using OpenMP.
NPTEL Topper 2017

Interest Area

- Robot software development
- Robot Operating System
- Kinematic and Dynamic modelling
- Multibody system design & simulation
- Humanoid robotics
- Control System
- Cyber Physical System
- Mechatronics design
- Mobile/ Aerial robotics
- Manipulator robots
- Wearable robots
- Rehabilitation robotics
- Embedded system