Om Manishkumar Patel

Nationality: Indian   **Date of birth:** 27/03/2001

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EDUCATION AND TRAINING

Masters of Science
University of Bayreuth [01/10/2023 – Current]

City: Bayreuth | **Country:** Germany

Bachelors of Technology
Birla VishWakarma Mahavidalaya [29/06/2019 – 20/06/2023]

Address: Opp. Shashtri Maidan Mota bazaar, Vallabh Vidhyanagar, 388120 Anand (India) | **Field(s) of study:** Mechanical Engineering | **Final grade:** 1.75

HSC
I.B. Patel English School [12/06/2017 – 31/05/2019]

Address: Near Bhaikaka Statue Mota bazaar, Vallabh Vidhyanagar, 388120 Anand (India) | **Field(s) of study:** Mathematics | **Final grade:** 83%

SSC
St. Stephens English School [12/06/2015 – 31/05/2017]

Address: 389151 Dahod (India) | **Final grade:** 88%

WORK EXPERIENCE

Simulation Intern
Deutsche Bahn [01/08/2024 – Current]

City: Berlin | **Country:** Germany

Modelling and Simulation for Automated Train operations (GoA2 & GoA4) on MATLAB, dspace and ROS

Modelling Seminar
Scherdel [05/05/2024 – 18/09/2024]

City: Bayreuth | **Country:** Germany

Stastical and AI based methods to find Quantities of Interest : Finding loss of Forces in spring due to relaxation based on given parameters using Deep Learning Approaches using MATLAB

Hilfswissenschaftler

University of Bayreuth [01/05/2024 – 31/07/2024]

City: Bayreuth | **Country:** Germany

- Working on solving DG systems using Block Floating Point type Arithmetic system for better performance, speed, accuracy and Space complexity

Research Trainee

Indian Space Research Organization [27/12/2022 – 23/06/2023]

City: Ahmedabad | **Country:** India

- Researched and Developed an Algorithm for different electro-mechanical systems such as Quantum Computers, Cryocoolers, Rovers and Telescopes.

Research Trainee

MahitX Technologies private limited [30/05/2022 – 30/06/2022]

City: Ahmedabad | **Country:** India

- Designed a Heating bed for low cost and open source RepRap high temperature 3-D Printer.
- Worked on Marlin and octoprint firmware, which is used to enable IOT features and multiple node operations on low cost and open source 3-DPrinters.

Skills gained: Ultimaker Cura, Marlin and Octoprint Firmware.

PROJECTS

[05/05/2024 – 18/09/2024]
Stastical and AI based methods to find Quantities of Interest Result of a Modelling seminar with SCHERDEL to find loss of Forces in spring due to relaxation based on given parameters using Deep Learning Approaches

[27/12/2022 – 23/06/2023]
Building a Feedback Closed loop system for Deployable Optical Telescopes Developing control algorithm for closed loop control feedback system of primary mirror wing, and secondary mirror deployment, positioning and locking function.

Building fully autonomous deployment system for Deployable Optical Telescope with multiple error handling capabilities.

Developing an algorithm for Power Optimization of the system.

[15/06/2022 – 13/12/2022]
Autonomous bot driving system using Deep learning
- Simulation and real-time testing of self-driving algorithm on small scaled bot was done by using computer vision and different Machine Learning techniques such as Classification and Regression.

Skills gained: Computer vision, Machine Learning.

[02/12/2022 – 31/10/2023]
Underwater Robot "MATSYA" A competition based Underwater with capabilities of Mapping, Perception and wireless communication under water.

[20/11/2022 – 05/03/2023]

Swarm Drones
- A competition based project for making different geometrical shapes and also for navigation purpose in remote areas using multiple drones. The tools which are being used for now are ROS, ardupilot firmware and RaspberryPi-4B.

CERTIFICATES

Simscape Onramp

Simulink Onramp

Ros for beginners: Basics, Motion and OpenCV

Introduction to Mechanical Engineering Designand Manufacturing with Fusion 360

Programming for everybody getting started with Python

Autodesk Certified User

DIGITAL SKILLS

C++ / C / Microsoft Word / SolidWorks / Microsoft Excel / Python / Arduino / Ultimaker Cura / PTC Creo / Autodesk fusion 360 / Linux / Microsoft Powerpoint / MATLAB / Git / Raspberry Pi / Simulink and Simscape / IOT / Robots Operating System (ROS)

LANGUAGE SKILLS

Mother tongue(s): Gujarati

Other language(s):

Hindi
LISTENING C1 **READING** C1 **WRITING** C1
SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

English
LISTENING C1 **READING** C1 **WRITING** C1
SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

German
LISTENING A2 **READING** A2 **WRITING** A2
SPOKEN PRODUCTION A2 **SPOKEN INTERACTION** A2

Sanskrit
LISTENING A1 **READING** A1 **WRITING** A1
SPOKEN PRODUCTION A1 **SPOKEN INTERACTION** A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

HOBBIES AND INTERESTS

Playing Football and Badminton

Watching Formula 1

Watching Anime

Reading Manga

Human History and Geopolitics