

PARIN SHAH

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EDUCATION

North Carolina State University, Raleigh, North Carolina

Expected: May 2026

Candidate for Master of Science in Aerospace Engineering

GPA: Pending currently in first semester of program.

Relevant Courses: Wing Theory, Advanced Dynamics and Aerospace Applications, Fluid Dynamics etc.

Mukesh Patel School of Technology Management and Engineering, Mumbai, India

May 2024

Secured a Bachelor of Technology (Honours) in Mechatronics Engineering with *Distinction*

(CGPA 3.55/4)

Minor in Artificial Intelligence and Machine Learning

Relevant Courses: Dynamic System Modelling and Analysis, Modern Control Systems, Drone Technology, etc.

Mukesh Patel School of Technology Management and Engineering, Mumbai, India

May 2021

Secured a Diploma in Mechanical Engineering with *Distinction*

(CGPA 3.55/4)

TECHNICAL SKILLS

- Design and Simulation software tools: AutoCAD, SolidWorks, Ansys Workbench, MatLab, Simulink, Mathematical Modelling (Theory) | PLC and Automation: Indra works, Bosch Rexroth, UiPath, and ROS2
- Programming Languages: Python, C, LabVIEW, and Arduino IDE.
- Power Tools and Machine: Drilling, Grinding, Soldering, Lathe, Rockwell Hardness Tester, Yaskawa Motoman 6-axis.
- Operating Systems and Productivity Tools: Windows, MacOS, Ubuntu, and MS Office applications.

PROFESSIONAL EXPERIENCE

Magnes.in, Mumbai, India | Product Development & Testing Intern

Jan 2024 – May 2024

- Liaised with the QC of the new E-bike from Magnes- Nimble.
- Identifying potential failures and coming up with a solution to tackle problems faced by the customers.
- Research and Development on the QC Techniques of the components in the E-bike like Battery, Controller, etc.

RTE Transweigh India Private Limited, Mumbai, India | Capstone Project Intern

July 2023 – November 2023

- Worked on developing RTE's latest technology- 'An Acoustic Hammer' - used for non-destructive testing using frequencies captured by the microphone on striking the hammer on the material.
- Analyzed the frequencies of different materials and differentiated the good and the bad parts with the help of a Frequency-Amplitude graph.
- Recognized industrial applications pertaining to the Automotive and Aerospace industries.
- Identified and addressed the flaws in the prototype model after numerous tests on a wide array of materials and validating results with a theoretical model.

TVS Motor Company, Hosur, India | In-plant Training

September 2023

- Liaised with the quality assurance department to test the stability of different automotive parts such as brake discs, calipers, sprockets, alloy wheels, etc.
- Collaborated with the design and engineering teams to implement improvements based on the quality assurance test results, enhancing automotive part durability and overall product reliability.

Pheme Software, Bangalore, India | Machine Learning Intern

May 2023 – June 2023

- Generated a model predicting the user's next location based on the previous location using Python and libraries like scikit-learn, and TensorFlow.
- Gained knowledge about the working of different models such as LSTM and GRU and how they hold the information on previous data to predict the user's next location.
- Employed Python with Pandas and NumPy for advanced data preprocessing, handling non-linearities in map coordinates and timestamps. Implemented nonlinear regression models in R to capture intricate data patterns and relationships.

ACADEMIC PROJECTS

Designing a Quarter Car Model | Simulink, Mathematical Modeling, Control Systems

- Determined a car's suspension stiffness and damping constants to meet the required acceleration and displacement constraints.
- Built a free-body diagram and derived the Equations of Motion through manual analysis, applying fundamental principles of physics and mechanics without relying on specialized software.
- Ran the equations in the MatLab script and found the required values by the trial-and-error method by analyzing the steady-state response in the MatLab.

EXTRACURRICULAR ACTIVITIES

MPSTME Racing Team | AutoCAD, SolidWorks, Electronics, Problem Solving

- Designed and manufactured an all-terrain vehicle as a part of the college's racing team and participated in BAJA 2023, Indore, India, and Mega ATV 2022, Goa.
- Worked as a core member of the Department of Data Acquisition of the college's racing team which was responsible for fine-tuning the vehicle's performance under different conditions for AY 2022-23.