Shareef Baba Shaik

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EDUCATION

Khammam Institute Of Technology and Science (affiliated with JNTUH)   June 2023
Bachelor of Technology, Mechanical Engineering – **7.28 CGPA**

Jawaharlal Nehru Govt Polytechnic Ramanthapur   June 2020
Diploma in Mechanical Engineering - **81%**

EXPERIENCE

PROJECT ENGINEER (MECHANICAL & ROBOTICS SYSTEM DEVELOPMENT)   27-Jan 2025 - Present
SRM UNIVERSITY - AMARAVATHI

- Lead project planning and management, including component selection, procurement, and scheduling.
- Developed conceptual designs using SolidWorks, performed motion analysis in MSC ADAMS, and supported prototyping through 3D printing.
- Implemented robot arm path planning using MoveIt 2, ROS 2, and Rviz for simulation and visualization.
- Integrated 3D perception systems using Open3D, OpenCV, Livox Mid-70 3D LiDAR, and Stereolab's ZED 2i depth camera for spatial awareness and mapping.
- Oversaw mechanical system fabrication, and handled motor selection, drive control, and integration for robotic arms.

INDUSTRIAL TRAINING AT HERO SHOWROOM SERVICE AND MAINTENANCE   28-Nov 2019 - 31-May 2020
HERO SHOWROOM – VM BANJARA

- Performed routine maintenance, diagnostics, and repairs on two-wheelers.
- Assisted in customer interaction and explained service details.
- Managed parts inventory and maintain service documentation.
- Followed safety guidelines and supported efficiency improvements

PROJECTS

Electrical Power Generation Using Speed Breaker
- Designed and implemented a system to generate electricity from vehicles passing over speed breakers.
- Converted kinetic energy into electrical energy to power streetlights.
- Promoted sustainable and energy-efficient solutions for urban infrastructure.
- Focused on renewable energy and mechanical-to-electrical energy conversion.

Design and Study of Two-Wheeler Suspension Using CATIA
- Designed and analyzed a two-wheeler suspension system using CATIA CAD software.
- Applied theoretical knowledge to practical challenges in suspension design.
- Gained hands-on experience in CAD modeling, dynamic simulation, and design optimization.
- Strengthened understanding of suspension mechanics and improved engineering design skill

Aircraft Landing Gear Design Using SolidWorks
- Designed a twin-wheel aircraft landing gear assembly using SolidWorks.
- Modeled key components such as the wheel, shock absorber, strut, and axle, and assembled them into a complete system.
- Focused on structural integrity, material selection, and dimensional accuracy for real-world performance.
- Demonstrated skills in 3D modeling, mechanical design, and component integration using CAD tools.

Snake Game – Python-Based Interactive Console Game
- Developed a classic Snake Game using Python and the Pygame library.
- Implemented object-oriented programming, game logic, collision detection, and score tracking.
- Designed user-friendly controls, real-time movement, and dynamic difficulty levels.
- Demonstrated strong skills in algorithm design, problem-solving, and GUI development.

TECHNICAL SKILLS

- **Programming Languages**: Python (with NumPy, Pandas, Matplotlib), basic MATLAB, basic SQL
- **Frameworks and libraries**: ROS (ROS1/ROS2), OpenCV, Open 3D
- **Microcontrollers**: - Arduino
- **Sensors**: - IR Sensor, Ultrasonic Sensor, servo motors and drivers, LIDAR, 3D Depth Camera
- **Design and Modelling and Analysis:** - SolidWorks, Catia, AutoCAD, 3D Printing, Ansys, MSC Adams
- **Robotics**: - SLAM, mobile robots, path planning, object tracking, Moveit2
- **Machine Vision**: - Machine Vision toolbox (MATLAB), OpenCV, Object detection and tracking
- **Data Science:** -Machine Learning, Data Analysis, Data Exploration, Data Wrangling, Data Visualization
- **Productivity Tools: -** Microsoft Word, Excel, PowerPoint, Access, Power Bi
- **Soft Skills :-** Project Management, Leadership Qualities, Communication Skills, Problem Solving Skills

CERTIFICATION

- CATIA in Internshala
- Arduino Complete Course: Build 30+ Projects Step by Step -Udemy
- ROS2 for Beginners (ROS Foxy, Humble - 2024) - Udemy
- IBM Data Science Professional Certificate – Coursera

DIY PROJECTS

- OBSTACLE AVOIDING ROBOT
- LINE FOLLOWING ROBOT
- MOBILE-CONTROLLED ROBOT
- VOICE-CONTROLLED ROVER

ACHIVEMENTS

- State 5Th rank in Aerospace Engineering Exam TSPGCET-2023
- 6.0 Band in IELTS
- Qualified in Ts Constable Physical Test -2022

LANGUAGES

- English
- Hindi
- Telugu

HOBBIES

- Robotics and DIY Projects
- Science Fiction Literature
- Cooking and Culinary Exploration
- Travel and Cultural Exploration

DECLARATION

I hereby declare that the information provided above is true and correct to the best of my knowledge and belief.

Place: Telangana, India
Date: 20 APRIL 2025
Signature: SHAREEF BABA SHAIK