

Saumya Shah

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SaumyaShah0

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Education

Nirma University

M.Tech in Robotics & Artificial Intelligence

2025–2027

LDRP-ITR

B.Tech in Computer Engineering

2021–2025

Experience

Software Development Intern — TatvaSoft

May–Jun 2024

- Developed backend components using **.NET (C#)** for enterprise-level applications.
- Optimized SQL queries and schema design for improved performance.
- Worked on debugging, code refactoring, and improving application reliability.

Projects

3DOF Robot Manipulator

- Designed and built a robotic arm capable of pick-and-place tasks.
- Implemented **forward & inverse kinematics** to achieve accurate end-effector motion.
- Controlled servo motors in real time using **Arduino**.
- Tools: Arduino, MATLAB, Servo Motors, Kinematics.

Line Following & Obstacle Avoiding Car

- Built an autonomous robot using IR sensors for line detection.
- Implemented threshold-based logic for robust line tracking.
- Added obstacle detection for dynamic path adjustment.
- Tools: Arduino, IR Sensors, Motor Driver.

Smart Energy Monitoring System

- Developed an IoT-based real-time appliance monitoring system.
- Implemented automation logic to reduce power consumption.
- Integrated sensors and cloud dashboard for remote monitoring.

Technical Skills

- Programming:** Python, C++, C, SQL, C# (.NET)
- Robotics:** Kinematics, Dynamics, Arduino, Control Logic, Sensors & Actuators
- AI/ML:** Machine Learning, Reinforcement Learning, OpenCV
- Tools:** MATLAB, Simulink, Creo, Git, Linux, VS Code

Soft Skills

Problem-Solving, Team Collaboration, Communication, Adaptability, Time Management

Certifications

- Python for Data Science — NPTEL
- Programming in C and C++ — GCTI
- Tata Crucible Campus Quiz 2025 — Participation
- HP Power Lab 2.0 (HPCL) — Participation
- Simulink Game Day (IEEE & MathWorks) — Participation