Navneet Tiwari

Automation Engineer, Wipro Limited

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Educational Qualifications

Year	Degree/Board	Institution	CGPA/%
2022 - 2024	M.Tech (Mechatronics)	Centre for Advanced Studies, AKTU, Lucknow	73%
2017 - 2021	B.Tech (EEE)	SRMS College of Engg. & Tech., Bareilly	67%
2016	Intermediate (XII)	R.N.T. Inter College, Orai	86%
2014	High School (X)	S.V.M. Inter College, Orai	88%

Research Interests

- Robotics and Control
- Real-Time Control Systems
- Mechatronics & Embedded
- AI & ML Systems

Hands-on Skills

- **Languages**: Python, Embedded C, C++, MATLAB
- **Tools**: Simulink, Jenkins, Git, Linux, ROS 2
- **Automation**: Selenium, CI/CD, Pytest, JIRA
- **Data/AI**: NumPy, Pandas, Sklearn, OpenCV, XSLT
- **Systems**: AUTOSAR, CAN Protocol, RTOS, HIL
- **GUI/Dev**: PyQt, Tkinter, VS Code, LaTeX

Professional Experience

Wipro Limited (Client: Intel)

Automation Engineer – Post-Silicon Validation   Oct'23 – Present

- Built Python-based validation suites to automate post-silicon chip testing, reducing manual debug time by 60%.
- Developed CI/CD pipelines via Jenkins for regression automation, improving system reliability and iteration cycles.
- Parsed system logs and hardware-level data using custom scripts for silicon diagnostics and control feedback.
- Interfaced with control hardware teams to design stress testing routines aligned with real-time validation benchmarks.

Wipro Limited (Client: Dana Incorporated)

Automotive Engineer – Embedded Testing   Nov'21 – Apr'23

- Configured airbag deployment logic, verified DBC signal decoding, and validated SRS control using CAN-based simulation and HIL testbeds.
- Designed real-time GUI dashboards using PyQt for monitoring door status, HVAC signals, and vehicle telemetry.
- Conducted MBD simulations in MATLAB Simulink for powertrain and battery diagnostics; created testing frameworks for embedded firmware.
- Drafted MBD-based testing guidelines that improved test coverage and modular verification.

Magov Robotics

Robotics Intern – Intelligent Systems   Mar'21 – Oct'21

- Developed robotic systems by interfacing sensors and actuators with microcontrollers for real-time motion control and data acquisition intended for industrial applications.
- Wrote embedded C programs to control servo motors, process sensor signals, and implement basic decision-making logic in robotic applications.
- Assisted in organizing and conducting technical workshops and seminars on robotics fundamentals, embedded programming, and automation systems.

Key Projects

- **12-DOF Bipedal Robot Kinematics** – Simulated and implemented real-time control of humanoid legs using MATLAB. **(Master's Thesis)**
- **MBD Testing Framework for EV** – Developed simulation-based guideline for electric vehicle component verification. **(Wipro)**
- **Post-Silicon Automation Suite** – Built Python tools to validate chip performance under regression load. **(Wipro – Intel)**
- **GUI Dashboard for EV Systems** – Created PyQt GUI for real-time display of door/HVAC status over CAN. **(Wipro – Dana)**
- **ML-Driven Fast Charging Model** – Applied predictive ML to analyze charging data patterns. **(Wipro)**
- **Real-Time Face Detection** – Deep learning-based webcam face recognition using PyTorch & OpenCV. **(Udemy)**
- **KUKA Robot Kinematic Simulations** – Developed MATLAB models for 6-DOF robotic arm motion analysis.
- **IoT-Enabled Robotic Nurse** – Autonomous health assistant with sensor interface and server-based health log sync. **(B.Tech Final Year)**
- **Insurance and Diabetes Prediction** – Regression models trained on health data for medical risk estimation. **(Udemy)**
- **IoT Projects** – Advanced Home **Automation** and **Vehicle Security** System prototypes with sensor modules.

Publications

- **Design and Analysis of Kinematic Model for a 12-DOF Bipedal Robot** – Presented at *IEEE Global AI Summit 2024*, Recived Best **Paper Award**
- **Development of PIXHAWK-Based Quadcopter: A Bottom-Up Approach for Current Consumption Optimization** – Published in *MAiTRI-2023*, Springer. DOI: 10.1007/978-981-99-8129-8_26

Certifications & Technical Training

- **Python Specialization (5-Course Series)** – University of Michigan
- **Embedded Systems** – University of California, Irvine
- **Internet of Things (IoT)** – Internshala Trainings
- **Data Science and Machine Learning (Basic to Advanced)** – Udemy
- **Computer Vision Fundamentals** – Udemy
- **Azure OpenAI + Prompt Engineering** – Udemy
- **Oracle Cloud Fundamentals** – Oracle
- **PLC Programming & SCADA Training** – Cepta Trainings
- **Linux Command Line Essentials** – Udemy
- **Complete Pandas for Beginners** – Udemy

Achievements

- Received **Best Paper Award** at IEEE Global AI Summit 2024.
- Delivered over 20 academic workshops and mentored junior students in robotics and automation.
- Secured **awards** in 17+ robotics/coding events including Robowars, PID Line Follower, and Drone Racing.
- Won **Best Project Award** for developing a Robotic Nurse during final year.
- State-level Volleyball Captain; multiple wins in Badminton and Chess at college level.
- Recognized among district toppers in 10th and 12th board exams; ranked within top 15 and consistently listed in merit panels.

Hobbies

- Teaching robotics systems and embedded hardware interfacing.
- Participating hackathons, tech talks, and technology competitions.
- Yoga, Swimming, Volleyball, Badminton, Chess.