

SUMIT KUMAR SAHOO

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Professional Summary

Innovative and technically skilled professional transitioning from IT infrastructure and cloud systems into advanced robotics, AI, and automation. Currently pursuing a Master of Science in Technology (Smart Energy – Robotics major) at the University of Vaasa with a strong academic record, specializing in machine learning, intelligent robotics, and embedded system design. Skilled in ROS, Gazebo, ABB RobotStudio, Machine Vision, and Deep Learning (PyTorch, TensorFlow), with hands-on experience in robot simulation, perception systems, GNSS-based navigation, and Kalman filtering. Proficient in Python, C, and C++, with practical knowledge in sensor fusion, SLAM, and control systems. Combining a foundation in cloud and software systems (AWS, Azure) with AI-driven problem solving and robotics R&D to develop scalable, real-world automation solutions.

Key Skills

- Robotics & Simulation: ROS, Gazebo, ABB RobotStudio, Robot Kinematics & Dynamics, Control Systems
- AI & Machine Learning: Python, PyTorch, TensorFlow, CNN, YOLO, Scikit-learn, Reinforcement Learning (basics)
- Embedded & Programming: Embedded C, C++, MATLAB, Raspberry Pi, Sensor Fusion (IMU, LiDAR, Camera)
- Cloud & DevOps: AWS, Azure, Docker, CI/CD Pipelines, Git, Linux Administration
- Project Management: Agile/Scrum, ITIL Foundation, Leadership & Team Collaboration

Education

Master of Science in Technology, Major: Robotics (Smart Energy)

University of Vaasa, Finland | 2024 – 2026 | GPA: 4.39/5

Key Courses: Applied Machine Learning, Machine Vision for Robotics, Intelligent Robotics, Embedded Systems, GNSS Technologies

Bachelor of Technology in Information Technology

Biju Patnaik University of Technology, India | 2006 – 2010

Professional Experience

IT Operation Specialist | Infosys Oy | 2011 – 2023

- Managed cloud infrastructure across Microsoft Azure and AWS.
- Served as Solution Architect for Amazon Connect-based contact center automation.
- Automated IT workflows using Python, PowerShell, and Bash.
- Led enterprise-scale system administration, performance optimization, and IT service delivery.
- Delivered international IT projects across Finland, Sweden, and India.

Certifications: ITIL 4 Foundation, Microsoft Certified Azure Administrator, Microsoft Certified Identity and Access Administrator, Azure Fundamentals.

Handson-Projects

- ROS2 Robot Simulation and Navigation in Gazebo – Autonomous mobile robot simulation with LiDAR-based navigation.
- Machine Learning Model for GNSS Jammer Detection – Applied Python-based ML models on Norway Jammer dataset.
- CNN-Based Animal Sound Recognition – Signal processing and CNN implementation for sound classification.
- 3D Vision & Reconstruction – Computer vision pipeline using OpenCV for depth mapping and 3D modeling.
- Kalman Filter for Real-Time GPS Data – MATLAB implementation for vehicle localization and tracking.

GitHub Projects

- Robotic-Arm-Manipulator-using-ROS-2-and-Gazebo-simulation – Simulated a 4-DOF robotic arm in ROS2 and Gazebo, implementing motion planning, kinematics, and control logic for manipulator tasks. (GitHub: <https://github.com/DsumitON/Robotic-Arm-Manipulator-using-ROS-2-and-Gazebo-simulation>)
- EquiHire_APP – Developed a Python-based AI application for candidate-job skill matching using machine learning and data visualization dashboards. (GitHub: https://github.com/DsumitON/EquiHire_APP)
- DatabaseIntegrityWithPython – Created Python scripts to automate SQL database consistency checks, logging, and integrity validation. (GitHub: <https://github.com/DsumitON/DatabaseIntegrityWithPython>)

- ML_With_Python – Implemented multiple machine learning algorithms (SVM, Decision Trees, Random Forest) with model evaluation and visualization using Scikit-learn and Matplotlib. (GitHub: https://github.com/DsumitON/ML_With_Python)

Languages

English – C2 (Fluent)

Finnish – A2 (Basic)

Hindi – Native