

# Kazi Abdul Jamil

*Robotics & Automation Engineer*

LinkedIn Profile

## Professional Summary

---

Motivated robotics and automation engineer with experience in intelligent robotic systems, human–robot interaction, teleoperation frameworks, soft robotics, computer vision, and AI-based control. Skilled in ROS/ROS2, robotic manipulation, embedded sensing, mechatronic system design, and machine learning for motion modelling and assistive robotics.

## Research Interests

---

Assistive Robotics · Teleoperation · Human–Robot Interaction · Soft Robotics · Embedded Sensing · Sensor Fusion · Data-Driven Modelling · AI for Motion Control · Rehabilitation Robotics

## Education

---

**Master’s Degree in Industrial Automation Engineering** 2021–2025

University of Pavia, Italy

Thesis: Data-Driven Teleoperation Framework for Assistive Robots (Franka Emika Panda, ROS2, PPCA/Deep-PPCA)

**Bachelor of Technology in Electronics & Communication Engineering** 2009–2013

West Bengal University of Technology (India)

## Research and Technical Experience

---

**Teleoperation Research — Assistive Robotics** 2023–2024

University of Innsbruck (Austria)

- Developed a data-driven teleoperation framework for intuitive control of high-DOF robotic manipulators.
- Implemented Deep Probabilistic PCA (Deep-PPCA) for mapping low-dimensional user inputs to robot joint velocities.
- Built ONNX-based real-time inference pipeline for adaptive motion control.
- Designed multi-mode joystick mapping and intuitive subspace control strategies.
- Conducted simulation experiments using Franka Emika Panda in RLBench, Gazebo, and ROS2.

**Soft Robotic Gripper for Object Recognition** 2018–2020

Shanghai Jiao Tong University (China)

- Designed and fabricated a pneumatically actuated soft gripper with embedded tactile sensing.
- Integrated resistive flex/pressure sensors for real-time contact detection.
- Developed closed-loop pneumatic control and object size recognition algorithms.
- Conducted pick-and-place experiments using a 7-DoF robot arm.

**Database Management Projects (Early Career)** 2012–2016

Industry/Institutional Projects

- Worked on structured databases, PL/SQL routines, data management and optimization tasks.
- Contributed to software and field operations for public-sector automation projects.

## Technical Skills

---

**Programming:** C++, Python, MATLAB, SQL, Bash, LaTeX **Robotics:** ROS/ROS2, Gazebo, RLBench, MoveIt2, CoppeliaSim, teleoperation systems **AI/ML:** PyTorch, scikit-learn, Deep PPCA, dimensionality reduction, motion prediction **Soft Robotics:** Pneumatic actuation, embedded sensing, feedback control **Computer Vision:** OpenCV, Dlib, object detection, motion tracking **Tools:** SolidWorks, Ubuntu/Linux, Git, Docker, MATLAB Simulink

## Publications

---

- “Evaluating Contact Detection, Size Recognition, and Grasping State of an Object using Soft Elastomer Gripper,” *International Journal of Advanced Computer Science and Applications*, 2020.

## Languages

---

**English:** C1    **Italian:** A2    **Bengali:** Native