

MUHAMMAD RASHID ALI KHAN

NUST'24 - Mechatronics Engineer | Ex-Embedded Intern
@ CARE pvt ltd. | Ex-ML Intern @ NCRA | Volunerring @
RAC

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muhammad-rashid-ali-khan



Expertise	Career Objective	Interest
<ul style="list-style-type: none">Esp32 (IDF)RTOSArduinoC/C++PythonMQTTLinuxGit and Github	Mechatronics Engineer with expertise in firmware development encompassing IOT applications and developing skills for embedded ML to solve robotics problems.	<ul style="list-style-type: none">ARMv7 (Assembly)Network protocols (HTTP/S, TCP, UDP)Raspberry PiNode.jsFlutterResearch Projects

Research Projects	Ongoing	Electrostatic adhesion mechanism-based robots Simulating and fabricating an efficient design of electro-adhesive pads with easy integration in robots
	Ongoing	Landing Gear Crashworthy Design for UCAV To design and simulate a crashworthy landing gear for UCAVs and compare it with modern designs

Patent	November 2023 (Filled)	UCAV Landing Gear Design Novelty is on the basis of unique design
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Education	2020-2024 National University of Sciences and Technology (NUST)	Bachelors in Mechatronics Engineering 3.68/4 CGPA
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Experience	2023	Embedded Design Intern CARE pvt. ltd. ESP IDF RTOS IOT MQTT
	2022	Machine Learning Intern National Center of Robotics And Automation Embedded ML CNNs SVMs

Projects

Mini-NERC (1 and 2) Wining Indigenous
Robot Design and Fabrication

Digital Dashboard development for NUSTAG Urban Car	ESP32 based IOT device for monitoring in mobile vehicle	Collaborative robot arm UR-5 Certification
Electrical Circuit Solver Software	IoT based Home Automation	Numeric key-pad development

Leadership

NUST Automotive Group Advanced Driver-Aid System Car Digital Dashboard Design Path Planning	Robotics and Automation Club (RAC) Supervisor AI Team Previously Team Lead UAV Team
National Engineering Robotics Contest Director Accommodations Leadership Event management	HULT Prize Organizer (On-campus) Team Outreach Marketing Outreach Brand management