

MOHAMMED VASHIR

Embedded Systems | Robotics | Automation

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[GitHub](#) / [4techno](#) | [LinkedIn](#) | [WhatsApp](#) | [Reddit](#)

PROFILE

B.Tech Electrical and Electronics Engineering student focused on embedded systems, robotics and automation. Project experience with ESP32 and Arduino, sensor integration, wireless motor control and mechanical CAD. Developing 4tech to provide project mentoring, technical training and prototype support.

EDUCATION

B.Tech in Electrical and Electronics Engineering | Second year

B.S. Abdur Rahman Crescent Institute of Science and Technology, Vandalur

TECHNICAL SKILLS

Programming: C, C++ with Arduino, Python, MATLAB

Embedded systems: ESP32, Arduino Nano, sensor integration, I2C, SPI, UART, motor and servo control

Design and analysis: SOLIDWORKS, KiCad, inverse kinematics, neural-network modelling

SELECTED PROJECTS AND RESEARCH

Automated Antenna Measurement System | Prototype development

Developed firmware and wiring for ESP32-based RF acquisition and motorised scanning using AD8317, NEMA17/A4988 and nRF24L01+. Worked on OLED output, live visualisation and CSV data export.

SewerSense IoT Monitoring | Hardware integration

Developed ESP32 firmware and a web dashboard for gas, temperature, humidity and pulse-sensor data. Worked through sensor detection, live data updates and alarm-control issues during hardware testing.

Wireless Transmitter and Receiver | Embedded control project

Assembled an Arduino Nano and HC-12 control system with dual-joystick input, DC motor control and servo steering. Worked on power distribution and voltage monitoring for the receiver.

Robotic Arm Design and Kinematics | CAD and computational research

Created a 5-DOF robotic-arm assembly in SOLIDWORKS. Developed analytical inverse-kinematics work for separate 3-DOF and 4-DOF models, explored neural-network approximation, and planned hybrid trajectory-tracking research.

INITIATIVE AND STARTUP ENGAGEMENT

4tech | Developing 4tech as a project-development and training initiative for students and startups, with a focus on microcontrollers, automation, simulation and remote technical support.

Represented Edutainal Maveric World at Crescent's 5th Mega Demo Day in 2026, explaining the startup's work to students and investors.

CERTIFICATIONS

MATLAB Onramp | MathWorks | February 2026

C Training | EduPyramids, SINE, IIT Bombay | November 2025; score 82.5%