

ALBIN SHAJAN C

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• **Portfolio :** https://albinshajanc.github.io/albinshanjanc_portfolio/

SUMMARY

Electronics and Communication Engineering graduate with hands-on experience in Embedded Systems, Microcontroller programming, PCB design, IoT fundamentals, UART,SPI,I2C protocols and Hardware interfacing. Skilled in C/C++, Python, Arduino and ESP32, with exposure to Verilog, FPGA, ARM, KiCad,EasyEDA and Analog Electronics.

WORK EXPERIENCE

Cyber Physical System Intern ,GEC Thrissur

June 2025

- Designed and modeled embedded system circuits with PCB routing and schematic design.
- Selected components and supported hardware optimization for improved system reliability.
- Applied analog and digital logic design principles in a functional prototype.

Cyber Security Intern,Cisco

Mar 2024 -May 2024

- Learned advanced security protocols, intrusion detection systems, and risk assessment methods.
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PROJECTS

Hand Gesture to Speech and Voice to Text Converter

- Designed an ESP32-based gesture-to-speech system using Edge Impulse for model deployment.
- Achieved 95 percent gesture recognition accuracy through embedded ML integration.
- Developed voice-to-text functionality to improve accessibility for hearing-impaired users.

Deep Learning and Reinforcement Learning based Battery Health analysis for electric vehicles

- Built a smart battery monitoring concept for electric vehicles using machine learning.
- Predicted SoC and SoH with 99.98% using RL and SoC with 99.95% accuracy with DL models.

Smart Automatic Household Water Pump Controller

- Developed an automatic and manual pump control system using intelligent switching logic.
 - Reduced water wastage by 25 percent and energy consumption by 15 percent.
 - Improved reliability through efficient control logic and practical automation.
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EDUCATION

Btech in Electronics and Communication Engineering

APJ Abdul Kalam Technological University
Vidya Academy of Science and Technology

Aug 2022 -May 2026

Higher Secondary

GVHSS Puthur

Oct 2020- Apr 2022

ADDITIONAL INFORMATION

- **Technical Skills:** Embedded C/C++,Python programming, Hardware interfacing, IoT,Circuit troubleshooting, PCB design, Analog and digital electronics, Verilog, FPGA
- **Languages:** English, Malayalam, Hindi(basic)
- **Embedded Platforms and Tools:** Arduino IDE, Platform IO, Blynk, Edge AI, TinyML/Tensorflow lite, Embedder AI, Ki Cad, LT spice, TinkerCad, EasyEDA, Keil µVision