Afsal K

Electrical and Electronics Engineering Student

Portfolio Website | GitHub | LinkedIn | afsalkalladi@gmail.com

Objective

Curious and self-driven B.Tech student in Electrical and Electronics Engineering at CUSAT, seeking a Data Engineer role to apply strong analytical skills, Python proficiency, and structured problem-solving in real-world projects. Quick learner with hands-on experience in logic-driven system design and a growing passion for data processing, clean code practices, and cloud technologies.

Education

B.Tech in Electrical and Electronics Engineering   2022 – Present
School of Engineering, CUSAT (Cochin University of Science and Technology)

Higher Secondary (Class 12)   2020 – 2022
Kalladi HSS, Kumarumputhur   *91%*

SSLC (Class 10)   2020
GHS Karakurissi   *96%*

Relevant Coursework

- Python Programming, Data Structures, Digital Logic Design, Database Systems (SQL), Signals and Systems, Microprocessors, Computer Architecture

Technical & Programming Skills

Programming & Data Tools: Python, SQL (Intermediate), C/C++
Data Engineering Concepts: Clean Code, Modular Logic, Control Structures, Debugging
Tools & Environments: Git, LaTeX, Linux CLI, Jupyter Notebooks
Other Skills: Verilog HDL, LTspice, Vivado, ModelSim, MATLAB (basic)
Soft Skills: Fast Learner, Communication, Team Collaboration, Critical Thinking

Technical Projects

ESP8266-Based Automated Water Level Control and Pump Protection System
- Designed modular control logic using ESP8266 for automated water management
- Implemented safety logic with dry-run timer and Wi-Fi-based remote override functionality
- Applied isolation techniques to interface microcontroller with AC-powered pumps

Pediatric Pneumonia Detection Using Deep Learning
- Built a CNN model using PyTorch and DenseNet-161 for classifying X-ray images (Pneumonia vs. Normal)
- Preprocessed and augmented medical datasets for training; achieved 94% test accuracy
- Focused on binary classification and model interpretability using Grad-CAM visualization

Initiatives & Leadership

- Tech Head, Electrical Engineering Students Association (EESA)   – Organized technical workshops and events
- Technical Team Member, YUVA
- Hackathon Participant – Explored hardware-software hybrid solutions for local challenges
- Volunteered in hands-on workshops on FPGA Programming, Embedded Systems, and IoT applications