MD Anaet Ullah | Embedded Systems Engineer

⚲ 63067 Offenbach am Main |
📞 +49 (0)176 31152823 | ✉ anaetcpi@gmail.com
🔗 linkedin.com/in/jewel3g |💻 github.com/jewel3g | 🌐 jewel3g.github.io

SUMMARY

Embedded Systems Engineer with 4+ years of experience in aerospace, automotive, and IoT industries. Specialized in microcontroller firmware (C/C++), PCB design, and system integration. Proven success in low-power optimization, signal integrity, and achieving EMC/EMI compliance (DO-160, MIL-STD-461).

EXPERIENCE

Electronics Development Engineer

Vectoflow GmbH |Gilching, Germany.   04/2024 - 05/2025

- Designed and developed VectoDAQ-2 and airflow sensor PCBs (4-layer, KiCad/Eagle).
- Supported firmware development, debugging, and integration using STM32CubeIDE and VS Code.
- Diagnosed and resolved HW/FW issues, improving system reliability by 20%.
- Performed EMC/EMI compliance testing, achieving DO-160 and MIL-STD-461/810 certification.
- Conducted validation and quality inspections ensuring aerospace-grade durability.

Embedded System Developer

Solarnative GmbH| Lohfelden Germany.   03/2023 - 02/2024

- Developed firmware for microcontrollers (C/C++) in solar inverter systems.
- Designed circuits and PCB layouts for inverter boards with reactive power correction.
- Performed hardware validation using oscilloscopes, spectrum analysers, and LCR meters.
- Supported EMC/EMI compliance testing for inverter housings and PV integration.
- Ensured safety and compliance with CISPR 11 and IEC 62109 standards.

Associate Software Engineer

Robert Bosch GmbH |Budapest, Hungary.   09/2022 –11/2022

- Developed embedded software for radar modules in automotive systems.
- Designed test software for Radar End-of-Line (EOL) validation.
- Specified and executed system tests, reducing defects in EOL production by 15%.
- Collaborated with EOL developers and cross-domain teams to ensure quality compliance.

IoT Engineer

Code 19 |Dhaka, Bangladesh.   01/2022 – 07/2022

- Developed IoT solutions including Code Aqua water monitoring (pH, DO sensors).
- Designed RFID-based inventory tracking system.
- Built firmware for sensor integration, data acquisition, and wireless communication.
- Conducted testing and calibration to ensure system accuracy.

Intern – Industrial Training

Eastern Cables Limited | Chattogram, Bangladesh   12/2012 – 02/2013

- Assisted in electrical and electronics system maintenance for industrial cable production.
- Gained hands-on experience with industrial testing equipment and quality assurance workflows.
- Supported senior engineers in troubleshooting production line issues.

EDUCATION

B.Sc. in Electrical and Electronics Engineering

Daffodil International University • Dhaka, Bangladesh   01/2015 – 04/2019

Diploma in Electrical Engineering

Chittagong Polytechnic Institute • Chattogram, Bangladesh   09/2009 – 03/2014

TRAINING

General Mechanics (GM)| Bangladesh German Technical Training Centre   01/2018– 06/2018

Recognition of Prior Learning | Bangladesh Technical Education Board   07/2018 – 07/2018

Masterclass on Internet of things Bangladesh Skill Development Institute   02/2018 – 02/2018

SKILLS

Firmware and Programming:

- C, C++, Embedded Linux, RTOS, STM32, ESP32

Wireless & IoT Systems:

- Low-power optimization, BLE, LoRa, Wi-Fi, MQTT, IoT.

Hardware & PCB Design:

- High-speed, RF, DC-DC, DC-AC Converter, Mixed-signal PCB design using KiCad, Eagle, EasyEDA.

Compliance & Testing:

- EMC/EMI testing (FCC, CE, DO-160, MIL-STD), power efficiency optimization.

Instrumentation & Measurement:

- Oscilloscopes, logic analysers, spectrum analysers, LCR meters.

CAD & Simulation Tools:

- SolidWorks, Onshape, MATLAB, LTspice.

Cloud & Data Systems:

- Firebase, IoT dashboards, remote data acquisition and visualization.

Software & Version Control:

- VS Code, STM32CubeIDE, Arduino IDE, Git/GitHub

PROJECT

On-Grid MPPT Inverter

- Designed DSP-based control algorithms to maintain PF >0.98 (C/C++).
- Optimized PCB layouts, improving thermal performance by 20%.

Mars Rover Prototype

- Designed PCBs for motor control, sensors, and power management (Eagle).
- Implemented autonomous navigation algorithms using STM32/Arduino.

Vehicle Accident Prevention & Emergency Aid System

- Integrated accelerometers, gyroscopes, and GPS on custom PCB.
- Developed firmware for collision prediction and emergency alert triggering.