MUHAMMED SHIBILI K

EMBEDDED DEVELOPER

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PROFESSIONAL SUMMARY

Exceptionally accomplished and skilled Embedded Software Developer with a zest for a challenging work environment with a high degree of responsibility. Proven record of successful work both independently and as a team member.

SKILLS

Embedded Programming	Embedded C/C++ | Shell Scripting | Python Basics
Microcontrollers	Hands-on Experience with STM32 | PIC16/18 | MSP430 | Arduino/ESP8266/Teensy
I2C/SPI/CAN	Multi I2C/SPI Networks | CAN Bus with STM32
Hardware/Software Debugging	JTAG | ST-link | Component testing skills | ERC | Protius sim | RF sim
Development tool skills	Git version control | Debian and Redhat | CUBE-MX | XC8 | CCS
PCB Designing	Circuit/Antenna Designing | Component sourcing/segregation | SMD Soldering/Testing

WORK EXPERIENCE

EMBEDDED DEVELOPER | Aug 2021 - March 2022

Otomator Technologies Pvt Ltd, Kolkata

- Worked under the team developing RFID smart poker table.
- Developed software for 8-player NXP- CLRC663 tag reader network.
- Designed and implemented long-range antennas and RF matching circuits.
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EMBEDDED SYSTEMS INTERN

Aester India PVT LTD, Cochin | Sept 2021

Edgate Technologies PVT LTD, Banglore | June 2020

EDUCATION & PROFESSIONAL DEVELOPMENT

Advanced Embedded System
Emertxe - Institute For Embedded Systems & IoT | 2022 - Ongoing

BE - Electronics and Communication Engineering
Anna University / DAIT Coimbatore | CGPA 7.7 | 2018 - 2022

Higher Secondary (Bio/Mat/Phy/Chem)
Government Higher Secondary School Pulamanthole | Perc: 80.83% | 2016 - 2018

ACHIEVEMENTS, POSITIONS AND RESPONCIBILITIES

- Quarter-finalist in Texas Instruments Indian Innovation Challenge Design Contest (IICDC) 2019
- Secured Kerala startup mission one-month incubation for PLC Fault Passage Detector.
- Lead

ACADEMIC & PERSONAL PROJECTS

1. PLC Fault Passage Detector for HV lines	
Project brief	https://drive.google.com/drive/folders/1G0slUBYHB8E_nZUYpwHoUyX9iPwKkOhc The Power line communication enabled Fault Passage Detector (FPD) to locate the line faults. Line current monitored using coil current transformer and OP-Amp. The Fault current (If)detected by STM32 and data transferred from PLM0A1 PLC module to the host microcontroller.
Technologies used	Power Line Communicaion, FSK modulation, Board support layer , C programming, Circuit designing
Key challenges & Learnings	• Transferring the data with multiple FPDs attached to the same line. •
2. POMOFOCUS Timer Clock	
Project brief	Multi Functional PIC based timer that can be used as fully functional seven-segment clock , Pomodoro 20 minutes beep timer as well as sports stop-watch.
Technologies used	PIC18F Timers, RTC, I2C, Timer Interrupts, Seven segment display, Li-Ion charging IC, LDO regulator
Key challenges & Learnings	• Main obstruct using SSD is Power efficiency on Battery powered device, using •
3. Dialisys-Monitoring-System	
Project brief	https://github.com/mshibili/Dialisys-Monitoring-System Remote dialysis by monitoring patient blood temperature, the volume of blood flows through the inlet chamber of dialysis, blood outflow from the dialysis chamber and bubble formations are monitored.
Technologies used	Arduino, Fluid Flow Sensor, AT-Commands and GPRS-module configuration, ThingSpeak
Key challenges & Learnings	• Interfaced and collected various sensor outputs to form reliable data • AT-Command operation and GPRS server communication.
4. LSB - Bit Steganography	
Project brief	https://github.com/mshibili/LSB-Steganography The objective was to send a secret text file encoded inside an image of bmp file format. Encoded the length of the secret text and then encoded the data into the LSB of the image bytes. The decoding process involves decoding the length and then decoding the text bit by bit. The final output is the secret text after decoding.
Technologies used	Embedded C – File operations, Pointers, Bitwise operations, Functions, Makefiles, Command line arguments
Key challenges & Learnings	• Transforming the embedded information to the destination without changing properties of original image .

	• Faced challenges while doing bitwise manipulation of data to embed as well to retrieve the data from the destination image which was solved by self-understanding
5.	
Project brief	
Technologies used	
Key challenges & Learnings	• 1 • 2 • 3

STRENGTHS

Agile and Disciplined Work

Feedback evaluated documented workflow and team play.

Ready to face challenges

Seeking challenges and innovation to push the skill boundaries.

Learn and grow mindset

Feedback evaluated documented workflow and team play.