

Muhammed Aquil Kodappanakkal

Kozhikode, Kerala, India | aquilkras@gmail.com | +91 95679 91677 | linkedin.com/in/muhammed-aquil-k

Professional Summary

- Software Developer with 1 year 10 months of experience working on real-world systems using C/C++, Python, and modern development tools.
- Experienced in building components for smart TV platforms on Linux, including HAL development and system-level debugging using Yocto and RDK.
- While my background is rooted in embedded systems, I'm eager to explore broader roles across software development—whether in systems, application-level, or platform engineering.
- Passionate about clean, scalable code and solving challenging problems in collaborative team environments.

Technical Skills

Languages: C, C++, Python

OS / Platforms: Embedded Linux, Yocto, RDK

Tools: Git, GitHub, GDB, CI/CD

Core Skills: Object-Oriented Programming, HAL Development, API Integration, System Debugging, Agile Workflows, Software Design Patterns, Version Control, Unit Testing

Professional Experience

Embedded Software Engineer, Tata Elxsi — Trivandrum, India

Oct 2023 – Present

- Developed and maintained system-level software in C and C++, ensuring stability, scalability, and performance for smart TV platforms.
- Collaborated in multi-developer environments using Git and GitHub for version control, code reviews, and issue tracking.
- Actively involved in debugging complex runtime issues using tools like GDB and log analysis.
- Contributed to build system maintenance and CI integration for consistent deployments.
- Worked cross-functionally with QA, integration, and product teams to deliver reliable software solutions on tight timelines.

Projects

System Software Development for Smart TV Platforms — Tata Elxsi

Oct 2023 – Present

- Worked on a smart TV software stack built on the RDK (Reference Design Kit) platform using C and C++.
- Developed HAL (Hardware Abstraction Layer) components to bridge SoC drivers with high-level middleware.
- Implemented system-level logic for tvSettings and deviceSettings, enabling seamless runtime configuration.
- Reduced middleware picture-quality processing latency from **10 seconds to under 30 milliseconds** through optimized logic and performance tuning.
- Introduced multi-threading and mutex mechanisms to ensure thread-safe memory access across runtime services.
- Contributed to build and integration tasks using the Yocto build system, including debugging with GDB and internal logging tools.

Leadership & Volunteering

Programme Committee Coordinator, TKM College of Engineering

May 2022 – Jun 2023

Led a team of 15–20 members in planning and executing numerous college-wide technical and cultural events.

Oversaw logistics, coordination, and execution of programs that engaged hundreds of students.

Programme Committee Member, TKM College of Engineering

May 2021 – May 2022

Contributed to organizing technical talks, workshops, and college festivals as part of the events team. Played a key supporting role in volunteer coordination and student engagement.

Vice Chairperson , IEEE SB TKMCE	Aug 2022 – May 2023
Spearheaded the All Kerala Technical Conclave at TKMCE, featuring technical workshops, expert talks, and a 24-hour hackathon. Managed event planning, outreach, and cross-team execution while fulfilling vice-chair responsibilities.	
Joint Secretary , IEEE SB TKMCE	Aug 2021 – Aug 2022
Served as part of the IEEE core team, contributing to strategic planning and execution of technical events, membership drives, and volunteering initiatives.	
Program Coordinator , ISTE TKMCE Student Chapter	Sep 2020 – Sep 2021
Organized seminars, student development programs, and technical events as part of ISTE's mission to enhance engineering education through practical learning.	

Education

B.Tech, Electrical & Electronics Engineering , TKM College of Engineering, Kollam, Kerala	2019 – 2023
<ul style="list-style-type: none"> Completed undergraduate degree with focus on electrical systems, digital electronics, and programming foundations. Engaged in technical societies and student-led initiatives during the course. 	
Devagiri CMI Public School , Kozhikode, Kerala — Grade 11–12 (CBSE)	2017 – 2019
<ul style="list-style-type: none"> Scored 94.6% in Grade 12 CBSE Board Examinations. Awarded school topper in Computer Science with a score of 97/100. 	
Al-Ain Juniors School , Abu-Dhabi, UAE — LKG to Grade 10 (CBSE)	2004 – 2017
<ul style="list-style-type: none"> Achieved a perfect 10 CGPA in Grade 10 CBSE Board Examinations. 	

Additional Information

Nationality: Indian

Languages: English (Fluent), Malayalam (Native), Hindi (Proficient), Arabic (Basic)