

THOUFIQ YAHYA

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R&D Engineer | Embedded Developer | Automotive IVI

EXECUTIVE SUMMARY

An experienced developer with more than a decade of expertise, specializing in Qt/QML and C++, primarily in the automotive industry. Before venturing into the automotive field, my career spanned across several domains, including game development and comprehensive web development, covering both front-end and back-end technologies. I have honed my skills in optimizing system performance within stringent hardware constraints. Additionally, I am proficient in graphic design, skilled in using tools like Photoshop, Inkscape, and Blender, and have a proven track record of seamlessly integrating creative talents with technical acumen.

FUNCTIONAL EXPERTISE

- **Language** - C++, Qt, QML, CMake, Python, Javascript, Bash
- **Technical Expertise** - HMI, UI/UX, Automotive Infotainment, Automotive IVI, Software Architecture, Design Patterns
- **Technical Proficiencies** - Linux, Docker, IPC, Sound Dialogue System, Voice UI, GUI, OOPS, SOLID Principles, Data structures

FUNCTIONAL EXPERTISE DEMONSTRATED

Mercedes Benz R & D India

April 2021 - November 2023

Mercedes-Benz is one of the biggest producers of premium cars and the world's biggest manufacturer of commercial vehicles with a global reach.

Technical Lead

As the technical lead for the Widgets team in India, I am tasked with comprehending the system, designing its architecture, and leading the team in widget development alongside the concept team.

- **Software Design and Architecture / HMI:** Worked closely with the concept team to implement widgets, converting detailed requirements into software architecture using UML diagrams.
- **Software Design and Architecture:** Leveraged SOLID and OOP principles to design robust architecture solutions.
- Led a team of five members in the development of Qt / QML / C++ based UI Widgets for the MBUX system, overseeing project milestones and ensuring the successful delivery of objectives.
- Collaborated with the CI/CD team to ensure the proper deployment of pipeline artifacts essential for Widgets development.

Mercedes Benz R & D India

April 2016 - April 2021

Senior Software Engineer

As a senior software engineer, I've engaged with diverse technology stacks, including sound dialogue systems, automotive IVI components, and widgets development.

- **C++ / Qt / QML:** Utilized Qt Framework to develop UI Widgets for the MBOS, demonstrating proficiency in delivering complex and multiple widgets within an agile environment.
- **C++ / Qt / QML / CMake:** Spearheaded the development of a Dialog Manager framework, integrating various NLU engines such as DialogFlow.AI, RASA NLU, Wit.AI, and Houndify as backends for the (SDS) Sound Dialogue System.
- **Bash / CMake:** Led migration activities from Ubuntu 16.04 to Ubuntu 20.04 by leveraging custom bash scripts and Docker containers, demonstrating strong problem-solving skills and adaptability.
- **C++ / Qt / QML:** Employed unit test frameworks such as GMock and GTest to implement Test-Driven Development (TDD) practices.
- **HMI / Automotive IVI:** Experience in development and connected applications in Automotive Human-Machine Interface (HMI).

- **HMI / Automotive IVI:** Experience in developing within the Linux environment, including proficiency with Inter-Process Communication (IPC) mechanisms such as D-Bus.
- **Technical Troubleshooting and Debugging:** Proficient in utilizing tools such as GDB, JIRA, Git, and the GCC toolchain.

L&T Technology Services

June 2014 – April 2016

L&T Technology Services Limited (LTTS) is a global leader in Engineering and R&D (ER&D) services.

Technical Consultant

Employed as an Embedded UI Developer at the client site, NDS Cisco., focusing on developing EPG Platform.

- **UI / QML:** Developed user interfaces (UI) for Electronic Programming Guide (EPG) on embedded systems within television setup boxes.
- **UI / UX:** Utilized Action Script 3.0 / 2.0 and Adobe Flash GUI tool to create intuitive and responsive UI elements for enhancing user experience.
- **JavaScript / ActionScript:** Implemented features such as channel guides, program schedules, and interactive menus within the EPG interface.
- Collaborated with hardware engineers to optimize UI performance and ensure compatibility with embedded system constraints.

I2Play Interactive

Nov 2012 – June 2014

I2india Ventures is a Bangalore-based incubator providing financing and mentoring solutions to technology startups.

Game Developer

- **UI / UX:** Responsible for integrating different animations and graphic assets into the game.
- Member of the NPC/Particle Effects team, tasked with the development of multiple NPC and particle effects within an MMOG.
- **OOPS / Data Structures:** Developed in-house game engine using different design patterns and OOPS concept.
- Led a team of two people in developing several mini-games and particle effects inside MMOG.

Excel Goodies

June 2011 – Jan 2012

A startup company that specializes in web development and online education platforms.

Game Developer / Web Designer

- **Data structures and OOPS concept:** Developed a 2D game framework from scratch and developed several games for K12 students using Flash.
- **UI / UX:** Designed several UI widgets and game assets using design tools such as Photoshop and Inkscape.
- **UI / UX:** Worked on HTML / CSS and developed UI screens for web browsers like Chrome, Firefox, and Opera.

EDUCATION

Bachelor of Information Technology

2006 - 2009

MS University ,Tamil Nadu, India.

OTHER RELEVANT INFORMATION

- **Additional Languages:** German (Rudimentary)
- **Technology:** C++, Qt, QML, Automotive IVI, HMI, UI/UX, Linux, Docker, Bash, JavaScript, Action Script, Adobe Flash, Adobe Photoshop, FreeCAD, Inkscape, HTML, CSS, Git, Tortoise SVN, Clear Case.
- **Achievements:**
 - Star Performer — L & T Technology Services (2015)
 - Winner of Innovation Boot Camp — MBRDI (2019)
 - Silver Star — MBRDI (2020)