NANDHISH THATHANUR RAJAPPA

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M.Sc. Digital Engineering Student | AI & Software Development |

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, SQL, QML, Java, JavaScript
- **AI & ML:** Natural Language Processing (NLP), Large Language Models (LLMs), Generative AI, Vector Databases, Prompt Engineering, Chroma DB, PyTorch
- **Software Development:** Agile-Scrum, Git, CI/CD, UML, CMake, SonarQube, Object-Oriented Programming (OOP), Parallel Programming, GUI
- **Other Tools:**Qt, CMake, Git, Visual Studio, Linux, Windows

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EDUCATION

Master of Science | Digital Engineering
Otto-von-Guericke-Universität Magdeburg, Deutschland (Oct 2023 – Present) | **GPA: 1.9**

Bachelor of Technology | Electronics and Communication Engineering
Vellore Institute of Technology, Chennai, India (May 2015 – Apr 2019) | **CGPA: 8.29**

WORK EXPERIENCE

Wissenschaftliche Hilfskraft – Otto-von-Guericke-Universität *(Apr 2024 - Present)*

- Optimized custom kernels for Xilinx Vitis AI Engine using AIE intrinsics and XDMA for efficient data transfer.
- Built **AxiDMA C++** driver for **Linux**, ensuring seamless **FPGA** integration.

Software Developer – Siemens Technology and Services, India *(Nov 2021 - Sep 2023)*

- Developed the **screen editor** in **TIA Portal** (C++, Qt, CMake), improving the **UI.**
- Designed **feature-level architecture**, led implementation, and mentored junior developers.
- Ensured seamless integration of software components within **industrial automation systems**.

Software Engineer – L&T Technology Services, India *(Jun 2019 - Oct 2021)*

- Developed **GUI for a patient monitoring device** *(ECG, SpO2, BP)* using **C++, QML**.
- Conducted **unit testing** *(Google Test)*, contributed to reducing defects.

PROJECTS

- **NVM-Optimized B-epsilon-tree (C++)** – Optimized write performance in non-volatile memory storage.
- **Disease Prediction Chatbot (Python, LLM, RAG, ChromaDB)** – Built a medical chatbot using BioMistral-7B for accurate diagnostics, chromaDB for text embeddings.
- **Flat Earth Believer Bot (Python, LLM)** – Engineered an NLP-driven chatbot with advanced sentiment analysis.
- **Three-Player Chess (Java, HTML, CSS)** – Designed an interactive multiplayer chess game with CI/CD pipelines.
