Kiran Jojare

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EDUCATION

Master of Science in Electrical Computer and Energy Engineering (M.S) *Expected 2024*
University of Colorado Boulder, Boulder, Colorado, USA
Courses Taken: Fall 2022 – Concurrent/Parallel Programming, Network System.
Spring 2022 (Currently Enrolled) - Principles of Embedded Software, Embedded System Design.

Post Graduate Diploma in Embedded System Design (PG - DESD) *2019*
Centre For Development of Advanced Computing (CDAC), Pune, India
Courses Taken: Programming Concepts, Real-Time Operating System, Embedded Operating System, Microcontroller & Interfacing, IoT and Programming, Embedded Hardware Design and Interfacing.

Bachelor Of Technology in Electronics Engineering (B. Tech.) *2018*
Government College of Engineering, Chandrapur, India

SKILLS

- **Languages**: C, C++, Assembly, M-Script / MATLAB.
- **Tools / Technologies**: MATLAB, Simulink, OpenMP, Linux, GDB, Valgrind, Objdump, OS, RTOS, Socket, Visual Studio, Android Studio, Exceed on Demand, ClearCase, ClearQuest, MCU Development (STM32), SVN, MS Visio, Buildforge, MTest, MXAM, Simulink Test Manager, Calterm III/IV, GitHub, GitLab, Smart Git, IBM Rational, DOORS, Integrity, Multi-threading, Parallel Computing.
- **Communication Protocols**: SPI, I2C, CAN, UART, CAN, LIN, Wi-Fi, TCP/IP, UPD, MQTT.
- **Hardware**: ARM Cortex M3 & M4, STM34F4x, Beagle Bone Black, Raspberry Pi, Oscilloscope, Logic Analyzer.

EXPERIENCE

Senior Software Engineer, ZF Friedrichshafen AG, Hyderabad, India *2021 - 2022*

- Designated as Senior Software Development Engineer for **Vehicle Motion Control & ADAS** for Corporate R&D Engineering Division with Model-Based Development Approach for upcoming **Cubi-X networked intelligence technology**.
- Created **C/C++ Autogenerated codes using Targetlink** from **MATLAB/Simulink models** based on software requirements and concept for new **autonomous driving software**.
- Conducted **MXAM model guideline violation checks**. Achieved model compliance and quality. Generated **A2L Files for code deliveries**.
- Tested and validated Simulink Model using **MTest** tool.
- Reorganized migration of Simulink models into Target link and enabling model for **Embedded C Code generation using Targetlink** codegenerator and tested using **Back 2 Back Tests or MIL vs SIL** tests.

Software Engineer, KPIT Technologies, Pune, India *2018 - 2021*

- Designated in **Cummins Emissions Solution (CES)** project involves understanding complete **Exhaust After-Treatment System**.
- Developed, enhanced & maintained different ECM features operated by Cummins, USA. by incorporating entire **Software Development Life Cycle (SDLC)** from requirement gathering to functional testing of available and new features.
- Developed models in **MATLAB/Simulink** and executed **C/C++ auto code generation leveraging RTWEC** based auto code generation tool.
- Performed **hardware bench testing** leveraging Calterm for requirements **analysis and validation of controls algorithms**.
- **Coordinated with onshore team** for requirements gathering, analysis and implementation of Dosing control and diagnostic algorithms.
- Performed complete dosing systems testing including **FMET testing using Calterm I/II/III** Testing Tool before software release.
- **Trained newly joined members** about Cummins architecture, Process, and all the Tools and oversaw **verification & validation** of DEF doser control software involving manual testing, MIL, SIL, HIL.
- **Developed MATLAB app to automate the plotting procedure**, reducing the significant effort lost in projecting the diagnostics data obtained from the Calterm bench testing tool by 35%.

PROJECTS

Student Lead, Smart Distributed Control System for Excavators via FreeRTOS, Pune, India *12/18-02/19*

- Accomplished and lead a RTOS based distributed real time operating system with **Shared Clock (S-C) scheduling** in environment excavators deploying **Beagle Bone Black** as master control unit and **STM32F407VG** as a slave supervising respective arms in supervised and deterministic environment where communication between master and slave is done through **CAN bus** interface.

Student Software Developer, System for Real Time Monitoring of Vehicles using CAN, Pune, India *12/18-02/19*

- Accomplished real time vehicle monitoring system. The project consists of one master receiver for monitoring vehicle data using sensors along with ignition switching control mechanism and one slave sender sending processed data to IoT platform respectively. The microcontroller boards leveraged for implementing master and slave **FLEXRAY** bus interface for communication in real time environment.

Student Developer, Concurrent Containers Using Open MP C++ Programming Model, Boulder, USA *07/21-12/21*

- Accomplished and developed different concurrent data structures like **SGL Stack, SGL Queue, M&S Queue and Trieber Stack** using **Flat Combining and Elimination** Based Optimization using **C++ and OpenMP programming model**.

ACHIEVEMENTS

- Awarded "**High Flyer**" award from KPIT Technologies for achieving customer satisfactory score (CSAR) of 4.8 out of 5 for contribution in "CES Component Development – Off-Highway" project and customer satisfactory score (CSAR) of 4.9 out of 5 for contribution in "CES Component Development – CSAR" project.
- Awarded "**Client Excellence**" from KPIT Technologies, Pune in recognition to commitment and contribution to outstanding performance in FY19-20 for raising bar of performance aligned with Culture of Excellence at KPIT.