Shikha Rathi

Embedded System|RTOS|SW Integration|FPGA

CONTACT

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RESUME OBJECTIVE

Overall **4 years** of professional experience and expertise in development, debugging and testing embedded software. Experience in C coding, Microcontrollers, FPGA, ARM based processors and testing tools. Actively looking for an opportunity in a dynamic organization which has a quality environment with a team of professionals amongst whom my knowledge and experience can be shared and enriched.

EDUCATION

MASTER OF SCIENCE
Embedded Systems
Oakland University, Michigan, USA
Sep 2020 – Aug 2021
GPA: **3.77/4.00**
Courses: Embedded System FPGA, Microcontroller, RTOS.

BACHELOR OF ENGINEERING
Electronics Engineering
RCOEM, India

KEY SKILLS

Tools:
Vector Canalyzer, Canape, Canoe, DAVinci configurator, EBTresos, K-SAR, Visual studios and OEM Specific tools.

Domain Experience:
Automotive Electronics, Experience working in CMMI, ASPICE process environment.

Leadership:
Taking initiative in project work, team player, leading and mentoring a team of 8 members.

AGILE Project Management:
JIRA, Confluence, SCRUM, Backlogs

Technical Knowledge:
AUTOSAR layered Architecture, Implementation of requirements as per ISO 14229-1, ISO1503, ISO 15765, Integration Testing, debugging embedded C code, MPC5784g controller architecture and memory layout.

Language:
Embedded C, CAPL.

Debugger:
Lauterbach for single and multicore environment

Database Management Tools:
SVN, IBM DOORS, MKS, PTS Integrity, Redmine.

Compiler:
GHS (Green Hills).

Protocol:
CAN, LIN, FlexRay, Ethernet, SPI

PROFESSIONAL EXPERIENCE

TEACHING ASSISTANT - MICROPROCESSOR   4 months
Oakland University / Jan 2021 – Apr 2021

- Teach undergraduate courses for microprocessor courses.
- Tutor or mentor students in completing lab assignments.
- Hand out assignments and grade papers.
- Record grades and inform students of their final grades.
- Create and write materials such as a syllabus, visual aids, answer keys, supplementary notes, and course websites.
- Lead discussion sections.

EMBEDDED SYSTEMS DEVELOPER   1 year 6 months
Continental Automotive Ltd., Bangalore, India / May 2017 – Oct 2018

- Analyzing and implementing customer interfaces for Transmission Control Unit in Embedded C language.
- Responsible for configuration and integration of CAN communication, Diagnostic Event Manager and Diagnostic Control Module and NVM using the vector DaVinci tool.
- Implementing services for Diagnostic Control Module as per ISO 14229.
- Developing and testing solutions to resolve OBD issues and responsible for compliance of developed solutions and control strategies with emissions standard and requirements.
- **Onshore Experience - Germany:**
- Responsible for handling Design Demo at customer location.
- Debugging issues and supporting immediate releases to customers in the vehicle production phase.
- Optimization of stack for RAM and ROM consumption for Mercedes S-Cross model Transmission Control Unit.

AWARDS&CERTIFICATION

CERTIFICATIONS

Mathworks training Certification for Matlab and Simulink

Seed certified technology specialist in software testing.

AWARDS

Star of the month
Sep 2017 at Continental Automotive Ltd.
Cheers Award
Oct 2016 at KPIT Technologies Ltd.
Cheers Award
Feb 2016 at KPIT Technologies Ltd.
Rookie Award
Dec 2015 at KPIT Technologies Ltd.

LANGUAGE

German - Certificate A1 Level

PROFESSIONAL EXPERIENCE

SOFTWARE DEVELOPER 2 years 4 months

KPIT Technologies Ltd., Bangalore, India / Feb 2015–May 2017

- Configuration and integration of CAN communication stack, FlexRay Stack, Ethernet Stack for AUTOSAR 4.0.3 Products.
- Write Test Plan and detailed Test Specification for Integration Testing & Software Testing.
- Debugging and issue resolution with Lauterbach Trace32 JTAG debugger and Vector tools for HEVs.
- Implemented CAN frames according to J1939 specifications.
- Analyzing requirements for AUTOSAR and ISO26262 based microcontroller device MPC5748g and configuring memory modules for 2020 car releases.
- Experience with configuration and integration for MCAL layer
- Leading a team of 8 members for requirement analysis, review and screen.

ACADEMIC EXPEREINCE

Sensor Data Acquisition and Transmission

- In this project, the accelerometer sensor on the freedom board is utilized by creating drivers that acquire the sensor data (using I2C) and transfer via serial communication (UART) to an external DK board.
- The sensor data acquisition and transfer happen only when the SW1 switch is pressed and the LED blinks when the serial data is transferred to external DK.

Design SD-card music player on Intel DE1-SOC Board

- In this project, an SD Card Music Player on the DE1 board is implemented, in which the music files are stored in an SD card and the board can play the music files via its CD-quality audio DAC circuits.
- The Nios II processor is used to read the music data stored in the SD Card and use the Wolfson WM8731 audio CODEC to play the music.

Designed a real time operating system - Central Gateway Module

- Designed and analyzed requirement for central Gateway module as system life cycle
- Determined tasks, assumed, and calculated response time, worst case execution time and periods. Theoretically proved that the tasks are schedulable using Rate Monotonic Scheduling technique.

REFERRALS/RECOMMENDATIONS

Michael Robl (Head of Development Department): Michael was my onsite manager while I was working as Software Developer at Continental Automotive company.

Endorsement: It is my great pleasure to write this recommendation for Shikha Rathi, as she is without any question an excellent software developer. What is more, Mrs. Rathi is highly motivated while being a very agile collaborator and extraordinarily reliable colleague. As head of a software development department for transmission control software, my team and I are focused on automotive communication software integration and configuration. Managing a SW project for the upcoming Mercedes S-Class transmission control unit, I had the chance to work with Rathi for almost 2 years in a very challenging project utilizing the latest embedded automotive software standards.

Mrs. Rathi worked in the project in Bangalore, Nuremberg and Regensburg with responsibility in communication stack, diagnostic communication and diagnostic error manager topics.

Her task was to clarify and analyze requirements with the customer, to integrate and configure AUTOSAR software and to implement project specific functionality in Embedded C. She earned the full respect of colleagues and customers alike in a very short time, since her way of colleagues and customers alike in a very short time, since her way of working and communicating is absolutely focused and clear, as well as open minded and based on profound knowledge of the technical background.

An outstanding feature of Shikha's time working in my team was her readiness to support and coach colleagues as well as giving structured reports to internal management and to the customer while fully committing to her challenging targets.

I am convinced that Mrs. Rathi has the potential to further develop and to prepare for challenges of highest complexity. I sincerely hope that the selection committee judges her application favorably. Please do not hesitate to contact me in case of any questions.

Jayshree S. (Tech Lead): Jayshree was Tech lead of my team while I was working as Software Developer at Continental Automotive company.

Endorsement: We have gone through many people in our career, but there are few that we can point to with ease. I can say Shikha is a passionate professional, she personalizes a rare combination of solid theoretical background and practical skills. She is a result oriented and focused team player with a drive and potential to strive to excellence.

Shikha's core strengths lies in her ability to manage the deliverable's efficiently and maintain good relationship with stakeholders.

Undoubtedly an excellent resource for any organization. It was a pleasure working with you.

I wish Shikha good luck in all her future endeavors!

Sandeep Banthiya (Project Manager): Sandeep was Project Manager of our team while I was working as Developer at KPIT Technologies.

Endorsement: shikha was part of my team for approximately 2years. She joined in as a fresher and has shown extreme dedication in learning and delivering the workstream assigned to her. Shikha was assigned with Configuration activities of AUTOSAR CAN, LIN, Flexray, Ethernet stacks. The stack was complex with aggressive timelines from customer - Shikha did take that as a challenge and paired up with her team to ensure as a team they deliver the output on time. I have very seldom seen any rework on her work. Shikha on the whole is a very dedicated, energetic, friendly and a team player. It has been a pleasure to have her in the team and I am very sure that she will continue to add value in any team she may belong. I wish her the best in all her perusals.

Thirunavukkarasu V. (Chief Manager): Thirunavukkarasu was my Chief Manager upon starting as software developer with Continental Automotive company.

Endorsement: Shikha is very much dedicated and committed towards the assigned tasks. She is highly energetic, talented team member and in short time she created positive impact with internal and external customer.