Shrisha PRASAD RAM

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ABOUT ME

Relocation to Germany: My relocation to Germany is fully supported by **expat-concept.com.** I´m eligible for EU Blue Card & Visa Sponsorship, available immediately and currently completing German Language A1.

Embedded Software Architect with 19+ years of Experience in safety critical Embedded Software / Firmware with strong hands on Individual contributor and technical leader. I have extensive international experience working in Europe on global projects and hold Automotive Cybersecurity & Functional Safety certifications from TUV Saar and SAFe Agilist from Scaled Agile.

WORK EXPERIENCE

SW ARCHITECT, L & T TECHNOLOGY SERVICES – 09/2024 – 12/2024

- Created outline concept for brain ECU with Classic/Adaptive AutoSAR ECUs connected via Ethernet/SOME IP.
- Interfaced with global teams for Program Increment(PI) planning on the Agile Release Train (ART), managed local sprints along with IBM EWM workflow integration.

SR. TECHNICAL ARCHITECT, HCLTECH INDIA – 01/2019 – 09/2024

- Defined the SW architecture for implementing UDS protocol (ISO 14229) on a Renesas RH850 based legacy ECU.
- Provided hands on technical leadership to a team of 4, delivered 30% ahead of time and reduced development costs by 60%.
- Ported freeRTOS kernel on RH850 based ECU, improved platform SW by a façade design pattern-based HW abstraction.

HCLTech JAPAN (2019 - 2021)

- Created outline SW designs for Software components (SW-C) Test SWC, COM Error Handler SWC on AutoSAR based ECU.
- This led to Increased customer confidence on developing new SW-Components at Application layer.
- Designed threadsafe, re-entrant middleware SW libraries on Freescale iMX257 target ECU / uITRON4 kernel for Tractor HMIs.
- Created SW Safety analyses using IEC 61784-3 fieldbuses for CAN communications black channel in stairlift firmware(SIL 2).
- Awarded Individual Best Performer by customer for architecture/ code deliveries for year 2020.

SW ARCHITECT - EMBEDDED, ALSTOM TRANSPORT – 06/2017 – 04/2018

- Built and managed a team of 4 members for the SIL4 SW Integration tests for Test campaign on Alpha releases.
- Created Application protocols architecture concept and safety layer black channel (EN 50159).
- Provided technical leadership to a team of 4 developers in developing a M out of N(MooN) Simulator based PC Application.
- Product & Platform - Safety Computer having 2 x (2 Out Of 2) Composite fail safe dual channel architecture running on Multicore CPU / PikeOS Hypervisor, Time / Space partitioning with CENELEC EN 50128 / RAMS.

FIRMWARE ARCHITECT / MANAGER, SIEMENS INDIA – 10/2011 – 06/2017

FIRMWARE ARCHITECT (Apr 2015 to Jun 2017)

- Defined a preliminary SW architecture for integration of LoRa radio module /LoRaWAN stack to Fault passage indicator (FPI).
- Technically led a team in prototyping using Semtech SX1278 COTS.
- Ported Micrium µCOSIII kernel on a Freescale Kinetis K10 for new bring up.

Principal Engineer - SW, Siemens UK R&D Centre (2013 - 2015)

- Defined HAL layer for Tricore / Cortex M4 platform, integrated freeRTOS and developed an OS Abstraction layer.
- Analysed and fixed PR / CRs on Platform and Communication SW components in legacy Control & Protection devices.
- Long-term deputation to UK R&D Centre aimed at technical transfer of SIEMENS Control & Protection products with UK and German teams.

Firmware Manager, Siemens (2011 - 2013)

- Ported Micrium µCOSII kernel on Blackfin DSP, developed platform SW drivers and integrated COM stacks- IEC101/104.
- Led a team (6-8) for developing parameterization, bootloader, fail safe voter and HTTP server for SICAM CMIC based Redundancy solution(SIL 2- IEC 61508).
- As Sub PM - firmware, successfully performed insourcing of RTU deliverables from contractors for NPI / NPD in Agile-LEAN.
- Built the firmware team, infrastructure/tools from scratch and ramped up the team size to 20.

- Identified 3rd party COTS libraries for make/buy decisions that led to improved platform sustenance.
- Worked on a long term in Siemens Austria.

SR.SW ENGINEER, CE+T BELGIUM – 03/2010 – 09/2011

- Implemented CANopen protocol and CANopen bootloader via Service data objects (SDO) upload/download mechanism by integrating stack from PORT GmbH.
- Developed modBUS and CAN management libraries, integrated firmware into the Inverter target(ST ARM9 micro).
- Worked in Belgium on a long term for SW development/Integration work packages.

SR.SW ENGINEER, ABB CORPORATE RESEARCH – 07/2005 – 10/2008

- Developed Distributed Network Protocol (DNP3) stack using C++/Vxworks 5.5.
- Designed middleware libraries for Trend/Alarm subsystem, unit tested achieving 90% coverage.
- Designed Vxworks drivers for SPI flash and RS485 on a PowerPC custom board.
- Worked for a long term in Sweden for development / SW integration.

ENGINEER- DESIGN, TATA ELXSI – 12/2004 – 06/2005

- Developed RTP/RTSP based multithreaded application on ARM9 / Linux.

SW ENGINEER, LARSEN & TOUBRO EMSYS – 07/2004 – 10/2004

- Enhanced platform SW on Vxworks 5.4/ PowerPC custom target / Diab C for Firmware sustenance tasks on medical devices.

RESEARCH ENGINEER FELLOW, DRDO GOVERNMENT OF INDIA – 02/2003 – 07/2004

- Developed and technically documented platform SW low level drivers in Vxworks 5.4 / PowerPC in a controlled DoD-STD-2167A process.

EDUCATION AND TRAINING

PG CERTIFICATE IN EMBEDDED SYSTEMS DESIGN, UNIVERSITY OF PUNE, B+ GRADE

BACHELOR OF ENGINEERING IN ELECTRONICS & INSTRUMENTATION, RV COLLEGE OF ENGINEERING, FIRST CLASS

AUTOMOTIVE FUNCTIONAL SAFETY (AFSP) - ZNUMBER 4714

AUTOMOTIVE CYBERSECURITY PROFESSIONAL (CACSP) , TUV SAAR

PROJECT MANAGEMENT AS PER PMBOK5 FROM IIT DELHI/ PMCC

INCOSE ASEP - SYSTEMS ENGINEERING PROFESSIONAL (CURRENT)

SAFE AGILIST, SCALED AGILE INC.

SKILLS

Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access | C, RTOS, Embedded SW, Firmware, Microcontrollers, SW Architecture Patterns, Team leading | firmware | use software design patterns | design firmware | define software architecture | lead a team | Agile project management | ICT communications protocols | embedded systems | software frameworks | develop ICT device driver | analyse software specifications | debug software | Programming: Embedded C/ RTOS, Platforms: 32-bit Microcontrollers, multi-core CPU

HONOURS AND AWARDS

Erasmus Mundus Master of Science in Photonics

Belgium Government fellowship for Masters of Science in Photonics engineering in 2009