SURAJ VIJAY KULKARNI

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Linkedin profile

Education

2010-14   M.S RAMAIAH INSTITUTE OF TECHNOLOGY, *Bengaluru*
Bachelor of Engineering, Electronics and Communications
GPA: 9.35/10.0

Experience

Seasoned software developer with nearly **10 years** of experience, specializing in building automotive security and diagnostic systems.

Proven expertise in:
- Leading teams and developing greenfield projects across **classic and adaptive** platforms.
- Collaborating effectively with stakeholders in European and Japanese locations.
- Delivering end-to-end software solutions throughout the entire Software Development Life Cycle (SDLC).

Strong background in process compliance, including ASPICE, DRBFM, FMEA standards and Agile methodologies.

Languages: C, C++11/C++14, Python, SQL
Technologies and Tools: IBM Doors, Enterprise Architect, Linux, Astree, Polyspace, Valgrind, Docs-as-code, MySQL
Version control: Git, Azure DevOps, Jenkins CI/CD

Technical Manager (August 2024 -)
KPIT - Bengaluru

- Working as solution architect in Virtualization topics.

Lead Engineer / Specialist (June 2021 - July 2024)
Bosch Global Software Technologies - Bengaluru

- Lead engineer working in **adaptive AUTOSAR security** topics.

- Implemented adaptive SecOC (Secure Onboard Communication) module from scratch.
  - Co-architected the design and its underlying communications with other modules for VRTE stack
  - Solution was implemented in C++ for both QNX and Linux platforms with compliance to ASPICE process.

- Led a team in developing a custom adaptive security solution for an IoT project (SOFC)
  - Contributed in security architecture discussions for the overall project
  - Ported SecOC (Secure Onboard Communication) to ARM64 Linux variant and implemented a custom Key Management solution
  - Developed expertise in TPM (Trusted Platform Module), utilizing it for key storage and specific cryptographic functions
  - Successfully demonstrated the communication between an ECU (classic SecOC) and an edge device (Adaptive SecOC).
  - Worked on-site at the client's location in Germany for final delivery

- Feature owner for KSP (Key Storage Provider) topics.
  Successfully implemented a range of features for the Key Storage Provider (KSP), including: Support for storage of key material, Key establishment, Management of different key slots, Configuration parsing and Access control for key slots.

- Served as Bosch's representative to the AUTOSAR Consortium for topics in the adaptive security
  - Contributed to the development of the SecOC (Secure Onboard Communication) Protocol Specification (PRS) document
  - Reported and tracked bugs, and participated in related technical discussions within the consortium.

Senior Software Engineer (October 2017 - May 2021)
Robert Bosch Engineering and Business Solutions

- Senior engineer working in **classic autosar diagnostic** topics.

- Component responsible for DCM (Diagnostics communication manager).
  - Requirement elicitation of customer features and modelling in Enterprise Architect.
  - Implemented various DCM features and services related to Security access, parallel UDS/OBD request processing, DID handling, encompassing various layers from DSL, DSD and UDS.

- Stakeholder Management and Feature Planning:
  - Discussion with various customers, stakeholders, product owners regarding new features, priority
  - Supervised, managed and led a team of 6 developers
  - Responsible to ensure good quality and timely delivery of Dcm work packages.

- Co-architected and implemented entire J1939Dcm module from scratch.
  - All the steps from requirements, Design, Implementation and Testing were carried out in strict adherence to quality - ASPICE approach (Level 2 certified)
  - Worked onsite in clients location(Germany) for final integration and release of the project

Software Engineer (September 2014 - October 2017)
Robert Bosch Engineering and Business Solutions

- Ramped up knowledge on various diagnostic topics, processes and tools and developed software independently
- Worked with senior team members to implement various DCM services (as per ISO-14229 specification) and contributed to defect fix handling
- Experience in Static Analysis, SW Unit, Integration and Qualification testing as per ASPICE.

Awards/Achievements

2023   Awarded Department "***Centerpiece*** " award

2018   Awarded "*Person of the Year* " among 450 people in the department

2017   Awarded "*STAR SURPASSER* " award

2010   Secured 165th rank (Engineering stream) in the Common
Entrance Test (CET 2010) taken by more than 100,000 students.