S I D D A R O O D
K A R A C H U R I

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Versatile and results-driven Software Developer with 3+ years of experience in Windows Forms Application Development, Full Stack Java Development, and Embedded Systems. Proficient in building real-time monitoring tools, simulators, and data visualization applications for aerospace and industrial domains. Skilled in C# (.NET Framework), Java, React JS, Docker, and Kubernetes. Demonstrated success in delivering mission-critical projects for organizations like ADA and Wartsila, with a strong focus on performance optimization, usability, and maintainability. A collaborative team player with a passion for innovation, system integration, and high-quality software delivery.

EXPERIENCE

WINDOWS FORMS APPLICATION DEVELOPER

Client – Aeronautical Development Agency (ADA), Bangalore | L&T Technology Services

JAN 2024 – CURRENT

- Designed and developed **Windows Forms applications** using **.NET Framework 4** and **C#**, streamlining avionics test workflows and improving UI responsiveness.
- Developed **RT simulator** and **bus monitoring tools** using **DDC EMACEBU69092 ACExtreme C# SDK**, enabling real-time observation and analysis of 1553B Remote Terminals.
- Created a **multi-tab RT monitoring application** with automated message logging, enhancing debugging and post-mission analysis capabilities.
- Built a **graph plotting tool** to visualize VDR data from 1553B bus logs, improving data interpretation for flight test engineers.
- Engineered a **real-time bit status monitoring tool** to dynamically visualize **bit states** from multiple **.dat files**, with **folder-based navigation** and selection support.
- Developed a **utility suite in WinForms** including **checksum calculator**, **VDR analyzer**, **automated letter generator**, and **1553 signal plotter**, reducing manual effort and increasing productivity.
- Used **ASTRA RT Simulator** for validation of avionics and SMS software, ensuring system stability and accuracy under various test conditions.
- Performed **unit testing** using **LDRA tool** for ADA95-based modules, writing and validating test cases in compliance with **DO-178C standards**.
- Supported **flight test teams** with **real-time monitoring**, **post-flight data analysis**, and **automated test report generation**, improving turnaround time and accuracy.
- Prepared technical documentation including **SDD**, **FRS**, and **STDR**, aligning with aerospace software development standards.
- Managed version control using **Git** and collaborated with team members for seamless **code integration** and **project tracking**.

FULL STACK JAVA DEVELOPER

Client – WARTSILA, Vadodara | L&T Technology Services

JULY 2022 – DEC 2023

- Developed responsive user interfaces using **React JS** and **Java Play Framework**, enhancing application performance and user engagement.
- Built dynamic front-end components using **HTML**, **CSS**, **JavaScript**, and **Material UI** for seamless user experiences.
- Implemented scalable Java-based microservices and optimized **MySQL queries** to boost backend efficiency and security.

- **Containerized applications** using **Docker** and deployed **microservices** on **Kubernetes clusters**, improving scalability and fault tolerance.
- Configured **Kubernetes Deployments**, **Services**, and **Namespaces** for environment-specific isolation and high availability.
- Applied **virtualization techniques** and **hypervisors** to manage isolated development and testing environments, optimizing resource usage.
- Used **Swagger** for documenting **RESTful APIs** and **Postman** for testing, ensuring integration reliability.
- Collaborated with teams through **GitHub** for version control and used **Jira** for project tracking and workflow management.
- Conducted **unit testing** to verify system functionality and enhance software stability.

ENGINEER TRAINEE
Client – BOSE, Mysuru | L&T Technology Services

NOV 2021 – JUN 2022

- Developed **embedded C applications** for validating device driver functionality using **JTAG**, **I2C**, and **SPI interfaces**, ensuring accurate hardware design and system reliability.
- Worked on **embedded driver development**, **microcontroller programming**, and **software testing** in alignment with **SDLC practices**, focusing on speaker functionality validation.
- Contributed to platform porting and functionality enhancement for multiple vehicle models, resolving issues tracked via **Jira**.
- Utilized tools such as **Serial Downloader**, **A2B Analyzer**, **TortoiseSVN**, **Understand Tool**, and **Notepad++** to improve development workflows.
- Gained beginner-level exposure to **Classic AUTOSAR** concepts and architecture.
- Conducted **debugging** and **root cause analysis** for **hardware-software integration issues**, improving performance and stability of **embedded speaker systems**.

AWARDS & RECOGNITION
Star of the Month – L&T Technology Services (ADA Project)

- Recognized for outstanding performance, service, and dedication toward the organization by delivering impactful solutions in Windows Forms application development and avionics software tools.

TRAINING AND CERTIFICATION

- The Complete 2023 Web Development Bootcamp – Dr. Angela Yu | View Certificate
- Master Java, Spring 6 and Spring Boot 3 with JDBC, JPA, Security, Docker and Microservices – Navin Reddy, Telusko | View Certificate

LANGUAGES

- ENGLISH   -   Professional Working Proficiency
- KANNADA   -   Native or Bilingual Proficiency
- HINDI   -   Professional Working Proficiency

SKILLS
Development & Testing

- C# (Windows Forms – .NET Framework 4), Java (Spring, Play Framework), JavaScript, React JS, HTML, CSS, Material UI
- RESTful API Development, Swagger, Postman, JUnit, Mockito, Integration Testing
- Agile (Jira), Git, GitHub, Unit Testing

- Python & Shell Scripting, Notepad++, TortoiseSVN, Understand Tool
- Technical Documentation (SDD, FRS, SRS, FLOC, STDR), Excel Automation, WinForms Utility Development
- Unit Testing with LDRA (DO-178C compliance)

Embedded Systems

- C Programming, Microcontrollers (STM32, ESP32, ESP8266)
- MIL-STD-1553B Protocol (RT Simulation, Monitoring, DDC SDK)
- Driver Validation, Signal & A2B Analyzers
- Embedded Systems Debugging, SDLC Process
- Classic AUTOSAR (Beginner Level)

Database & Cloud

- Docker, Kubernetes, Virtualization & Hypervisor Setup
- MySQL, MS SQL, Software Deployment

EDUCATION

BACHELOR OF ENGINEERING (Electrical and Electronics Engineering)

BMS Institute of Technology and Management, Bengaluru, Karnataka

Oct 2021 | CGPA: 7.84

DIPLOMA IN ENGINEERING (Electrical and Electronics Engineering)

The Oxford Polytechnic, Bengaluru, Karnataka

Jul 2018 | Percentage: 79.33%

PUC (Pre-University Course)

Marimallappa PU College, Mysuru, Karnataka

May 2016 | Percentage: 65.83%

SSLC (Secondary School Leaving Certificate)

Athani Vidyavardhak High School, Athani, Karnataka

Mar 2013 | Percentage: 72.48%

INTERESTS

Cycling   Photography   Trekking   Reading Books

DECLARATION

I, Siddarood, hereby declare that the information provided in this resume is true and accurate to the best of my knowledge. I consent to its use for evaluating my suitability for employment and authorize necessary verifications.