Shekhar Singhal

Software Product Owner/Team Lead

Immediate Joiner on JSV in Germany

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About Me

- A focused and meticulous professional with **11+ years** of experience specializing in **product management, software development, and embedded systems design.**
- Expertly managed **project management tasks**, including crafting a project timeline, estimating effort, loading resources, analysing requirements, creating technical documentation, designing architecture, allocating tasks, and generating status reports.
- Experienced with **Kanban, SCRUM, Agile, Waterfall & V-Model** methodologies in the SDLC.
- Well-versed in providing technical guidance in continuous integration and continuous delivery **(CI/CD).**
- Proficient in managing diverse **product teams** and communicating with **internal and external stakeholders**.

Technical Skills

Programming	**Embedded C/C++, Python,** TCL, Assembly, Shell Script, Structured Text, IEC 61131, UML
Microcontroller	8051, AVR, ARM (7TDMI, Cortex A5/9, M3/4), PSoC 1/3/5, Xtensa LX3, USB Controllers (CYUSB3014/35 & FT232R)
Tools & IDEs	Keil, LPC Xpresso, MCU Xpresso, PSoC Creator, Wind River Workbench, Eclipse, MATLAB & Simulink, Xtensa Xplorer/OCD, Visual Studio, IAR WorkBench, Mbed Studio, LDRA, Arduino, IDLE Python, PyCharm, SVN, Mantis, GitHub, Confluence, Jira, BitBucket, AWS-IoT Core, WordPress, MITRAC TCMS, Control Build, IBM ALM (DNG, RTC, RQM), SharePoint, Android Studio.
Protocols	UART, SPI, I2C, USB, 1-Wire, BLE, Wi-Fi, Bluetooth, RF, GPS, GSM, MQTT, Custom Protocol using Bit banging.
Hardware Interfacing	LCD (Alphanumeric & Graphical), Motor(DC, Stepper & Servo), Sensors (Temperature, IR, Ultrasonic, Accelerometer, Gyroscope, Magnetometer), Battery Monitoring, I-Button, Memory (NAND, NOR, SRAM), Keypad (Matrix & Touch), Finger Print, Smart Card, Thermal Printer, SMFD.
Debugging tools	JTAG, Protocol Analyzer, Function Generator, Oscilloscope, Digital Multimeter.
OS/Environments	BareMetal, FreeRTOS, Mbed OS, ThreadX, µC/OS, VxWorks, Windows, Linux

Work Experience

⬤ Software Lead Engineer / Product Owner - ALSTOM Vadodara, INDIA   *Jun'21 – Apr'23*

- Managed **2 Products** (Wireless Crew Device & Video Analytics) with **14 cross-functional** (Product, Project, Engineering, and QA) global team members, a **€1.8M** Budget, and **2 Year** Roadmap**.**
- **Assisted & mentored** Software Development and VnT teams during bug fixing & Root Cause Analysis.
- Developed portions of the Android plugin to connect with **Azure cloud** and **Server web socket** on Java.
- Extensively used & provided mentoring in requirement writing on **DOORS/DNG.**
- Created an effective **Resource loading** plan for 5 team members to parallelly complete 3 projects.

Key Achievements:

- **Optimized** the Firmware's Elf file Size to **18%** & reduced CPU Load up to **50%** of its originals**.**
- **Improved** Team efficiency **by 20%** by creating a traceability matrix between DSD, SyRS, SRS & Code.

● **Project Lead** - **Logic Fruit Technologies Pvt. Ltd.** Gurugram, INDIA *Apr'19 – Jun'21*
- Involved in **18+ projects** for Development & Integration with customer-designed systems.
- Identify required **key skills** for the project & find internal and get hired the required resource.
- Designed projects timeline & planning considering **budget constraints & resource competency.**
- Led a team of **20 people** consisting of SW, HW, FPGA & QA.

Key Achievements:
- Hired & Mentored **8+ team members**, who delivered a 6-month timeline project in 4 months.
- Successfully Developed & Deployed **6 projects** to **Indian & International (Finland & Germany)** Clients.

● **Module Lead** - **Logic Fruit Technologies Pvt. Ltd.** Gurugram, INDIA *Apr'16 – Mar'19*
- Design, develop, and test **firmware & middleware**, and hardware for various applications.
- **Conducted research** to identify new technologies and methodologies to improve the performance and efficiency of systems & **mentored** the team to use them.
- Responsible for **System integration** with 3rd party or customer applications.

● **R & D Engineer** - **Logic Fruit Technologies Pvt. Ltd.** Gurugram, INDIA *Sept'15 – Mar'16*
- Designed and implemented **application code & low-level drivers**.
- Executed functional and unit testing & debugging through DSO, CRO & logic analysers.

● **Chief Research Officer** - **IGen Solutions Pvt. Ltd.** Pathankot, INDIA *Mar'15 – Aug'15*
- **Formulated and executed investigation** tactics aimed at accomplishing customer objectives.
- Offered guidance and assistance to researchers for the purpose of **facilitating advancement** and **maturation** in the field.

Key Achievements:
- During my 6-month tenure, I conducted research and developed over **5 products/projects**.

● **Senior Consultant** - **Multisoft Systems** Noida, INDIA *Sept'12 – Feb'15*
- **Created a total of 10+** training modules & processes and delivered them across the country.
- Trained more than **1000 Students** & **100 Corporate** Employees

Key Achievements:
- Guided **15+ Scholars** in their master's thesis & Developed **10+ Projects/Products**

● **Embedded System Trainer** - **CETPA Infotech Pvt. Ltd.** Noida, INDIA *Jan'11 – Aug'11*
- Provided training and developed, coded, tested & debugged embedded solutions for **8051 & AVR Family MCU's** in **Assembly, Embedded C & C++** language.

Education

● **Master of Technology** VLSI Technology - **Sharda University** Greater Noida, INDIA *Sept'11 – Aug'13*

● **Advanced Diploma** Embedded Systems - **ThinkLABS, SINE, IIT Bombay** Mumbai, INDIA *Jun'10 – Dec'10*

● **Bachelor of Technology** Electronics and Communication Engg. - **Uttarakhand Technical University** Dehradun, INDIA *Aug'06 – May'10*

Languages

- **Hindi –** Native
- **English -** Proficient
- **German -** A1 (Lower Beginner)