



Shekhar Singhal

R&D Project Manager | Tech Lead
Embedded Systems

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Professional Summary

Strategic R&D Project Manager and Technical Leader with **13+ years** driving innovation in embedded systems and intelligent automation. Excel at dual-role execution—managing complex R&D projects with **full project accountability** while providing hands-on technical leadership in **edge AI/ML, vision systems, and modular architectures**. Proven ability to align project portfolios with technology roadmaps, champion continuous improvement cultures, and deliver **on-time, within-budget** results across **multi-national, cross-functional teams**. Recognized for transforming technical challenges into competitive advantages through SDS principles, risk management excellence, and stakeholder-centric delivery.

Skills

PM RDPM-S, SDS, Agile (Scrum/Kanban), Waterfall, V-Model, Risk & Opportunity Management, Budget Planning
Tools JIRA, Confluence, MS Project, IBM ALM (DNG/RTC/RQM), Azure DevOps, Git
Technical Embedded C/C++, Python, IoT Protocols, Edge Computing, AI/ML Optimization, Vision Systems, CI/CD

Work Experience

- **Siemens** Lisbon, Portugal *Jan'24 – Till Date*
 - **Project Manager - R&D — (May'26 – Till Date)**
 - Manage R&D projects with **full accountability** for cost, schedule, quality, and customer satisfaction; drive projects using SDS principles in collaboration with Product Managers/Owners
 - Steer **budget, resources, and project agreements**; execute risk & opportunity management; ensure compliance to architecture, security, safety standards, and IP rights
 - Champion **cross-functional collaboration**, stakeholder management, and continuous improvement culture through knowledge management and best practice sharing
 - **Continue Tech Lead responsibilities**: Spearhead CoreAssets/Modularization initiatives and provide technical guidance on GenScan 360° DCP and AI/ML edge optimization
 - **Senior Embedded Software Developer — (Jan'24 – Apr'26)**
 - **Tech Lead**: Spearheaded CoreAssets/Modularization project — delivering modular architectures and CI frameworks for SEA within Siemens Digital Industries, enabling adaptive product portfolios
 - **Core Developer**: Built camera applications for GenScan 360° DCP — multi-frame aggregation, real-time recording from **40-camera arrays**, and HTTP streaming for industrial inspection systems
 - **Research Developer**: Optimized AI/ML models for deployment on resource-constrained embedded devices, advancing Siemens' **edge computing & intelligent automation** portfolio
- **ALSTOM** Vadodara, INDIA *Jun'21 – Apr'23*
 - **Software Lead Engineer / Product Owner**
 - Owned **2 products** (Wireless Crew Device & Video Analytics) — **€1.8M budget, 14-member global team, 2-year roadmap**.
 - Designed resource loading plan enabling 5 team members to concurrently deliver 3 projects: championed DOORS/DNG requirements engineering.

Key Achievements:

- Reduced firmware ELF size by **18%** & CPU load by **50%** | Boosted team efficiency by **20%** via traceability matrix (DSD → SYRS → SRS → Code)

● Logic Fruit Technologies Pvt. Ltd. Gurugram, INDIA

Sept'15 – May'21

- Project Lead / System Architect — (Apr'19 – May'21)

- Managed 18+ development & integration projects, leading 20-member cross-functional teams (SW, HW, FPGA, QA)
- Handled full project lifecycle — resource planning, timeline management, and budget optimization

- Module Lead / Software Architect — (Apr'16 – Mar'19)

- Architected firmware, middleware & hardware solutions across diverse embedded applications
- Conducted technology research to enhance system performance; led 3rd-party & customer system integration

- R&D Engineer — (Sept'15 – Mar'16)

- Designed & implemented embedded applications and low-level drivers
- Executed comprehensive hardware testing using DSO, CRO & logic analyzers for firmware validation & debugging

Key Achievements:

- Developed innovative software architecture reducing development effort by **40%** and achieving **70% code reusability** across new projects
- Successfully **delivered 6 projects** to Indian and international clients (Finland & Germany)
- Hired and mentored 8+ team members, accelerating a 6-month project delivery to **4 months**

● Earlier Roles

Jan'11 – Aug'15

- **Chief Research Officer — iGen Solutions:** Delivered **5+ R&D products in 6 months**
- **Senior Consultant — Multisoft Systems:** Trained **1,000+ students & 100+ corporates**; mentored 15+ postgraduate scholars
- **Embedded Systems Trainer — CETPA Infotech:** Hands-on training in Assembly, Embedded C/C++ for 8051 & AVR MCUs

Education

- **M.Tech, VLSI Technology** — Sharda University — (2011–2013)
- **Advanced Diploma, Embedded Systems** — ThinkLABS, SINE, IIT Bombay — (2010)
- **B. Tech, Electronics & Communication** — Uttarakhand Technical University — (2006–2010)

Languages

- **Hindi (Native)** · **English (Proficient)** · **German (A1 — Learning)** · **Portuguese (A1 — Learning)**