Ravi Prakash

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Professional Summary

Experienced **Signal & Telecommunication Engineer** with **12+ years** in Indian Railways, specializing in the design, development, and quality assurance of **mission-critical signalling systems**. Proven expertise in **Automatic Train Protection (KAVACH), Electronic Interlocking, MSDAC, IPIS, and SIL-4 compliant safety systems**. Adept at **standards compliance, system integration, fault diagnostics, and EMI/EMC testing**. Recognized for driving innovations that enhance **railway safety, reliability, and operational efficiency**.

Core Competencies

- Railway Signalling & Telecommunication Systems
- Automatic Train Protection (ATP – KAVACH)
- SIL-4 Safety Compliance & Certification
- Electronic Interlocking (EI) & MSDAC Systems
- EMI/EMC & Environmental Testing
- Quality Assurance & Regulatory Alignment
- Reliability Engineering & Failure Diagnostics
- System Integration & Validation
- Project Deployment & Standards Evaluation

Professional Experience

Research Designs and Standards Organisation (RDSO) – Lucknow, India

Senior Engineer – Signal & Telecom Systems
2013 – Present

- Led design validation, deployment, and evaluation of **KAVACH (Automatic Train Protection System)** across pilot and mainline sections.
- Directed assurance activities for **Electronic Interlocking (EI), MSDAC, LED signalling systems, and Integrated Passenger Information Systems (IPIS)**.
- Spearheaded **quality assurance** of safety-critical signalling equipment, ensuring compliance with **SIL-4 standards**.
- Conducted **EMI/EMC and environmental testing**, validating signalling systems under extreme operational conditions.

- Collaborated with cross-functional teams, OEMs, and regulatory bodies to align with **Indian Railway Standards and global signalling practices**.
- Delivered technical evaluations, type testing, and functional acceptance testing for next-generation railway technologies.

Key Achievements:

- Played a pivotal role in the nationwide rollout of **KAVACH** enhancing railway safety.
- Improved **system reliability** through advanced diagnostic and fault-analysis methods.
- Established **QA frameworks** ensuring consistent compliance with safety and performance standards.

Education

- **SRMS College of Engineering & Technology, Bareilly**
  B.Tech – Electronics and Communication Engineering
  Jul 2006 – Jun 2010 | Grade: First Class

Certifications & Training

- Railway Signalling Standards & Testing (RDSO)
- SIL-4 Safety Standards & Compliance
- EMI/EMC Testing & Environmental Qualification
- Reliability, Availability, Maintainability, and Safety (RAMS)

Notable Projects

- **KAVACH (ATP System):** System validation, assurance, and testing for large-scale deployment.
- **MSDAC Deployment:** Multi-section axle counter integration for train detection.
- **Electronic Interlocking:** Safety validation and standardization of interlocking systems.
- **LED Signalling:** Reliability testing and compliance evaluation.

Professional Interests

Railway Safety Systems | Signalling Innovations | RAMS Engineering | Quality Assurance & Standards