

PERSONAL INFO

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Vignesh Venkatesh LinkedIn

EDUCATION

MSc Railway Systems Engineering and Integration

University of Birmingham

BTech Automobile Engineering

Hindustan Institute of Technology and Science

KEY SKILLS

- Rolling stock Maintenance
- Mechanical Engineering
- Engineering Systems
- Project Management
- Health & Safety
- Faults Diagnosis
- Mechanical Testing
- Asset Management
- Quality Maintenance
- Rolling Stock Design
- Railway Traction Systems
- Infrastructure and Track Systems
- Railway Control Systems
- Safety at Work
- Teamwork and Leadership
- Negotiation
- Railway Infrastructure

PERSONAL SKILLS

- Problem Solving
- Flexible
- Analytical
- Attention to Detail
- Time Management
- Multitasking

CERTIFICATIONS

- IBM- IoT Maximo Overview
- IBM- IoT Maximo New features
- IBM- IoT Maximo Contract Management
- IBM- IoT Maximo Workflow
- IBM- IoT Maximo Asset Management
- IBM- IoT Maximo multisite and Org
- IBM Engineering Requirements Management DOORS V9.6 – Practitioner
- Model Based System Engineering with SysML

VIGNESH VENKATESH MSc MIET AMIRSE

Control Systems Consultant

Methodical, Methodical and technically inclined engineer with a strong background in transportation, maintenance operations, business systems, and railway technologies. Boasting a comprehensive expertise in system engineering and integration, I possess a profound understanding of on-board Train Protection Systems, such as AWS/TPWS and ETCS, vital to the broader rail environment. As an esteemed member of the IET (Institution of Engineering and Technology) and IRSE (Institution of Railway Signal Engineers), I am ardently working towards charterhip, reflecting my dedication to professional development and field excellence.

My practical experience extends from data analysis, IT, application systems, to the intricate nuances of the software development life cycle. Drawing from this vast reservoir of skills, I am poised to contribute to pivotal roles, especially in project and program plan development, risk mitigation, issue resolution, and adept change management. Proficient in using tools like DOORS for requirements management, I have effectively led cross-functional teams, demonstrating prowess in project communication, knowledge management, status reporting, and mentoring team members as well as end-users. My ambition is to further harness these competencies, making impactful contributions in roles that marry engineering innovation with strategic project leadership.

OVERVIEW

- Strong analytical and product management skills; experienced in interpreting client business needs and translating them into application and operational requirements.
- Strong consulting services in the field of rail control systems, with a particular focus on communication systems, control systems, systems integration, and operational control.
- Conceptualizing and implementing tools.
- Proficient in analysing user requirements, work process flows, business capabilities, systems, and business processes; as well as proposing procedures for continuous process automation, significant improvement of existing IT systems, and overall technical performance.
- Well Trained in Test script creation and Training Supervision

PROFESSIONAL EXPERIENCE

Principal Systems Engineer

Jan 2024 – Present

Park signalling, Manchester

As a Principal Systems Engineer, I am responsible for delivering key technical documentation and system-level input for the redevelopment of the Design Workstation (DWS), a critical tool used in Solid State Interlocking (SSI) data preparation. The legacy DWS is being replaced with a modern, standards-compliant platform designed to support the UK rail industry through 2050 and beyond.

My role involves defining and documenting system requirements, interface specifications, and assurance strategies in accordance with EN 50126 and 50716. I have been instrumental in determining how the new DWS will interpret and manage SSI data structures ensuring compatibility with legacy workflows while enabling scalable and maintainable engineering practices.

I collaborate closely with project leads, developers, and validation teams to ensure the system design meets both technical and operational expectations. My structured and detail-oriented approach has helped guide the definition of verification strategies, traceability models, and lifecycle documentation critical to the success of the programme.

TOOLS

- IBM- IoT Maximo
- DOORS
- Office 365
- JIRA
- Confluence
- Power Bi
- Tableau
- Visual Studio
- BRIAD data loader
- Git Hub
- PostMan
- Ecosys
- JDE

Consultant

Atkins, London

As a consultant, I am involved in providing high quality Rail control systems consultancy services with a focus on communication systems, control systems, systems integration, operational control, or signalling.

Jan 2022 – 2024

Senior Requirements Engineer, High Speed Rail 2

As a Senior Requirements Engineer, my principal achievements include rigorous management and verification of system requirements across diverse modules, with a specialized focus on compliance and integration using IBM Rational DOORS. I have led the verification of the Contracts Requirements Module to ensure it meets discipline-specific standards and aligns with contractual obligations, while actively interfacing with the Transversal Module to guarantee integration and compliance across various engineering disciplines. My expertise in DOORS has enabled me to expertly manage requirement datasets, facilitating accurate traceability and efficient requirement changes to support the project lifecycle. I developed and maintained detailed documentation of all requirements and verifications, enhancing project transparency and supporting effective decision-making processes. In my current role, I have established a reputation for meticulous attention to detail and an unwavering commitment to the highest standards of requirement engineering, with my strategic approach and deep technical expertise instrumental in navigating complex requirements landscapes and driving project success

Project Manager

As a Project Manager, my key accomplishments include leading the ETCS Cybersecurity project for Freightliner. In this role, I managed Project Status Reports, ensuring accurate and timely updates on the project's progress. A significant part of my responsibilities involved financial oversight, particularly in handling the invoicing process for the ETCS project. I also played a pivotal role in drafting project proposals, aligning them closely with the technical requirements and objectives of the ETCS/ERTMS systems. My role extended to maintaining robust client relationships, especially with Freightliner, focusing on their specific needs in ETCS cybersecurity. This involved effective team resource allocation and diligent budget management, emphasizing the cost-efficiency of the project. My experience in this project underscores my proficiency in managing complex, technology-centric initiatives in the realm of ETCS/ERTMS.

Requirements Engineer, East West Rail Alliance

As a Systems and Requirements Assurance Engineer, I've played a pivotal role in the East West Rail Alliance, focusing on the elicitation, documentation, and verification of requirements. My primary responsibility has centred on capturing the client needs, translating them into User, Stakeholder, Operational, System, and Subsystem requirements. In alignment with the GRIP methodology, my specific contributions have been most pronounced in stages 5 (Detailed Design), and 6 (Construction, Test, and Commission). To ensure a structured approach, I've been instrumental in shaping the Requirements Management Approach, integrating industry-standard tools like DOORS for database design and implementation. While collaborating with the team overseeing the requirements baseline, I've emphasized rigorous change control and captured essential verification and validation data. This has ensured that requirements are demonstrably linked to tests and their outcomes. My role has been enriched by my proficiency in various Requirements Management tools, especially DOORS, and a deep understanding of best practices such as traceability, acceptance criteria, and change control.

Rail Station Accessibility Audit, Department for Transport

As an auditor on the Rail Station Accessibility Audit project for the Department for Transport, I am responsible for evaluating the compliance of a diverse set of train stations and their surrounding areas with accessibility standards for passengers with disabilities. To accomplish this task, I utilize a combination of record analysis and on-site visual inspection to gather data on the accessibility of each station, which is entered into a digital application for analysis. In addition, I have been trained to provide instruction on proper surveying techniques and health and safety protocols to new surveyors, and I often accompany them on their initial audits to ensure that they are properly following established procedures. Overall, my role involves assessing the accessibility of rail stations and identifying any necessary improvements to meet the needs of all passengers, including those with disabilities.

Signalling Infrastructure Condition Assessment, London Overground

As a consultant, I was responsible for the conceptualization and implementation of the Signalling Infrastructure Condition Assessment (SICA) tool for London Overground. This tool was designed to assess and record the technical and engineering status of assets within the London Overground network. I worked closely with the clients to identify the key components that needed to be incorporated into the tool in order to ensure its validity, reliability, fairness, and flexibility. I also played a pivotal role in the development process, overseeing the design and coding of the tool to ensure it met the specified requirements and functioned optimally.

Future command control signalling design and validation(F-CCS) project, Network Rail

In the Future Command Control Signalling Design and Validation (F-CCS) project for Network Rail, I was responsible for creating process diagrams, making recommendations for the implementation of automation, and defining process outputs and their assurance requirements.

ETCS Test Verification Validation & Integration Laboratory (TVV&I), Network Rail

In my capacity as a consultant at the ETCS Test Verification Validation & Integration Laboratory (TVV&I) for Network Rail, I played a key role in the ETCS Lab Test Verification Validation & Integration project. My responsibilities in this project were critical and multifaceted, involving the facilitation of interoperability testing of multiple manufacturers' ETCS equipment. This task was essential to ensure conformance to the relevant Technical Specifications for Interoperability (TSIs) for both trackside and on-board applications. In addition to transcribing relevant documentation and executing test procedures to verify equipment functionality and compatibility with the TSIs, I was actively involved in initiatives to achieve ISO 9001 and ISO 17025 certifications for the ERTMS lab. This involved developing and implementing quality management systems and processes that met the rigorous standards of these certifications, thereby significantly enhancing the lab's operational excellence and credibility in the field of ERTMS testing and validation.

Enterprise Asset Management Consultant

ArcadisGen, Canary wharf, London

Arcadis Gen specializes in Data Analytics, Enterprise Asset Management, and Digital Business Transformation for the utilities and transportation sectors.

As an Asset Management Consultant at Arcadis Gen, I specialized in implementing and supporting Maximo, a comprehensive solution for asset and safety management in the utilities and transportation sectors. In this role, I was responsible for providing clients with strong support and help in understanding their detailed requirements through interviews and process analysis. I then used my knowledge and skills to develop process flows, user stories, and worked with functional designs to configure the Maximo system to meet the specific needs of each client from a technical standpoint.

During my time at Arcadis Gen, I also played a key role in the delivery and management of an agile development project. I participated in sprint planning, daily scrum, stand-up, and retrospective meetings, and worked closely with the development team to clear backlogs and ensure the successful completion of each sprint. I also used Jira to track and manage issues, epics, stories, and tasks throughout the development process, leveraging my experience with a range of tools, including Confluence, Braid Data Loader, Git Hub, Azure Repository, Postman, and Power BI.

In addition to my work with clients and the development team, I was development team to clear backlogs and ensure the successful completion of each sprint. I also used Jira to track and manage issues, epics, stories, and tasks throughout the development process, leveraging my experience with a range of tools, including Confluence, Braid Data Loader, Git Hub, Azure Repository, Postman, and Power BI...also responsible for technical assurance and testing. This included conducting unit testing, regression testing, integration testing, user acceptance testing, and end-to-end testing to ensure that the Maximo application met the needs of clients and the business. I utilized automation testing using Selenium in Visual Studio to

increase productivity, improve testing accuracy, and save 30% of the time in the test cycle

ROLLING STOCK SERVICE SUPPORT

Chennai Metro Rail Ltd, Chennai

As a Rolling Stock Service Support Engineer, I am responsible for ensuring that the fleet of Electric Multiple Units (EMU) are well-maintained and operating efficiently. This involves carrying out routine maintenance on the trains using instructions from the Computer Maintenance Management System, as well as undertaking fault diagnostics, maintenance, and repair of the allocated rolling stock. I am experienced in performing both scheduled and unscheduled repair work on the EMU, which includes mechanical, electrical, and troubleshooting repairs. I also regularly monitor train defects and failures to identify potential issues and proactively mitigate risks of in-service failures. In addition, I am skilled in producing complex, analytical technical reports on fault investigation and processing train diagnostic data. Overall, my goal is to provide high-quality support and maintenance to keep the rolling stock in top condition.

ASSEMBLY LINE SUPPORT

Ford India production plant, Chennai

In my role, As an Assembly line support operator, I was responsible for providing technical support to the assembly team. I assessed and analysed current production methods and inspected manufactured parts to ensure they met quality specifications and followed security and safety policies. I also oversaw production throughout the manufacturing operations and created an environment that encouraged the sharing of best practices and ideas. I inspected completed products to verify their functionality, machine capabilities, and conformity to design specifications. Furthermore, I performed quality checks on products and parts, and provided support, mentorship, and direction to the assembly teams.

ASSISTANT TECHNICIAN (Intern)

Khivraj Motors, Chennai

As Car maintenance technician, I have demonstrated a strong ability to diagnose and repair a wide range of automotive issues. My technical knowledge and problem-solving skills have allowed me to effectively identify and address problems with customer vehicles, ensuring that they are returned to optimal functioning. I am also experienced in working with diagnostic equipment, which has allowed me to diagnose problems quickly and accurately with a variety of systems and components in vehicles.

I am also skilled in providing exceptional customer service. I understand that customer satisfaction is a key part of the automotive repair industry, and I am committed to ensuring that every customer I work with is treated with respect and understanding. I am able to clearly explain automotive repair issues and procedures to customers, helping them to better understand the work that I am performing on their vehicle.