Dongjae Yi (이동재)

Senior Systems Engineer | Technical Program Manager

Senior systems engineer with 12+ years of experience delivering complex electro-mechanical and software-driven platforms in safety-critical, regulated environments. Specializes in system-level requirements, integration, verification, and root-cause analysis across global R&D teams, with a Master's in Analytics enabling data-driven modeling and quantitative decision-making.

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SKILLS

Systems Engineering & Integration	System integration, requirements definition and traceability, embedded systems validation	**Verification, Validation & Risk**	Verification and validation, root cause analysis (RCA), FMEA, test strategy
Technical Leadership & Collaboration	Cross-functional technical leadership, mentoring, global collaboration	**Data, Modeling & Analytics**	Python, MATLAB, SQL, statistical analysis, design of experiments (DOE), simulation and modeling environments

WORK EXPERIENCE

Technical Project Manager – Systems Engineering
JIOS Aerogel (Electric Vehicle Battery Startup)

08/2024 - 04/2025   *Singapore*

- **System Architecture & Integration:** Defined system-level requirements and performance targets for EV battery thermal protection products, translating customer needs into integrated hardware, material, and process specifications.
- **System Verification & Risk Analysis:** Led system-level verification using structured test strategies, applying root-cause analysis and risk assessment to identify failure modes and improve reliability and manufacturability.
- **Data-Driven System Optimization:** Applied DOE to multi-variable test data to identify performance variability and guide system design and process decisions across prototype validation and production readiness stages.

Senior Systems Engineer | Technical Program Manager
Continental Automotive

01/2022 - 05/2023   *Singapore*

- **System Architecture & Trade-Offs:** Selected and integrated vehicle sensor fusion systems to improve driver access performance, achieving coverage of blind zones without adding hardware cost under commercial constraints.
- **System Integration & Validation:** Defined localization accuracy metrics and validation criteria, driving system-level testing and client demonstrations while iterating test strategy with software teams to resolve integration failures.
- **Technical Leadership & Verification:** Mentored test engineers on requirement-based test design, corner-case identification, and failure prioritization, reviewing results with software teams to guide fixes and ensure readiness.

System Requirements Engineer
Continental Automotive

08/2020 - 12/2021   *Singapore*

- **System Feature Ownership:** Owned system-level requirements for remote software updates, diagnostics, data upload, and security, defining interfaces across embedded controllers, gateways, and backend systems.
- **Requirements Definition & Trade-Offs:** Defined functional and security requirements under standardized embedded architectures (AUTOSAR), balancing feature scope with hardware and data storage constraints for reliable remote updates.
- **Traceability, Compliance & OEM Alignment:** Managed requirements in DOORS with end-to-end traceability to test cases, leading change impact analysis and compliance reviews across global regulatory regions.

WORK EXPERIENCE

System Test Manager & Engineer
Continental Automotive

01/2011 - 07/2020   *South Korea, Singapore*

- **System Verification Ownership:** Owned system-level verification for electro-mechanical embedded control systems, leading end-to-end testing in integrated and simulated environments to validate system behavior.
- **Test Strategy & Release Readiness:** Defined system-focused test strategy, acceptance criteria, and requirement-to-test traceability, prioritizing regression and automation to optimize coverage across multiple concurrent embedded system programs.
- **Technical Leadership & Infrastructure:** Led and mentored a team of five engineers, driving system-level root-cause analysis across software and hardware teams, and designing closed-loop simulation environments supporting regulated standards and external reviews.

Founding Member | Engineering Lead
The Ice Bath Club (Wellness Startup)

01/2024 - 07/2024   *Singapore*

- **Chiller & Filtration Systems:** Owned and optimized chiller and water filtration systems, improving thermal efficiency, reliability, and performance through continuous monitoring and system-level troubleshooting.
- **System Troubleshooting & Root-Cause Analysis:** Performed daily root cause analysis on novel operational failures in an early stage startup environment, diagnosing mechanical, fluid, and control issues to improve system performance.
- **Analytics & Performance Optimization:** Analyzed operational and customer data to optimize utilization, pricing, and service workflows, translating insights into measurable improvements in efficiency and member experience.

EDUCATION

M.Sc in Analytics
Georgia Institute of Technology

01/2022 - 05/2025   *Georgia, United States*

- Advanced coursework in statistical analysis, machine learning, and optimization, applying quantitative methods to system modeling, simulation, experimentation (DOE), and data-driven engineering decision-making.
- Completed a concentrated full-time study period during 06/2023 – 12/2023

B.Sc in Mechanical Engineering
SungKyunKwan University (성균관 대학교)

03/2002 - 02/2011   *Suwon, South Korea*

LANGUAGES

Korean	English	Japanese	Mandarin
Native or Bilingual Proficiency	*Full Professional Proficiency*	*Limited Working Proficiency*	*Limited Working Proficiency*