Pranav Iyer Junior Systems Engineer

Olathe, KS · pranav.iyer.se@gmail.com · +1 913-555-0172 · linkedin.com/in/pranaviyer

PROFILE SUMMARY

- **Junior Systems Engineer** with **3 years** at **Garmin** on **cockpit domain controllers** for carmakers, after a systems engineering internship at **Cummins** on engine aftertreatment controls.
- Uses **Jama Connect** and **DOORS** for requirements, **Cameo Systems Modeler** for SysML, **MATLAB and Simulink** for analysis, and **dSPACE**, **Vector CANoe** and **Python** on the HIL bench.
- Knows **derived requirements**, **CAN FD signal ICDs** and **HIL regression testing**, and follows **ISO 26262** and **ASPICE Level 2** process rules on every software release.
- Works with **software, hardware and test engineers** and the **carmaker's systems team**, and presents requirement changes at the weekly **change review board**.
- Wrote the team's **CANoe bench setup guide**, helped **2 interns** run their first HIL tests in 2025, and is preparing for the **INCOSE ASEP** exam.

TECHNICAL SKILLS

Requirements & ALM Tools:	Jama Connect, DOORS (internship), ReqIF, Jira, Confluence
MBSE & Modeling Tools:	SysML, Cameo Systems Modeler, Enterprise Architect (reading models)
Simulation & Analysis:	MATLAB, Simulink, Stateflow (basics), Python
Integration & Test Tools:	Hardware-in-the-loop, dSPACE SCALEXIO, Vector CANoe, Python test scripts
Interfaces & Data Buses:	CAN FD, Automotive Ethernet, LIN, UDS diagnostics
Safety & Reliability Methods:	FMEA, ISO 26262 safety requirements, fault injection testing
Standards & Lifecycle:	ISO 26262, ASPICE, V-model, INCOSE SE Handbook

EDUCATION

Purdue University — **B.S. in Electrical Engineering** — West Lafayette, IN · Aug 2019 to May 2023

WORK EXPERIENCE

Garmin — **Systems Engineer** — Olathe, KS · Jun 2023 to Present

- Wrote and linked **460** derived requirements in **Jama Connect** for a cockpit domain controller, tracing each one to a carmaker requirement and a test case before the B-sample release.
- Modeled the controller's power modes and boot states in **Cameo Systems Modeler**, which caught **3** conflicting wake-up rules between the carmaker's spec and the software design before coding started.
- Kept the CAN FD and Automotive Ethernet signal ICD current across 3 controller variants, and ran checks in **Vector CANoe** that found **41** mismatched signal definitions before the first integration build.
- Automated HIL regression tests on the **dSPACE** bench in **Python**, cutting a full overnight run from 9 hours to **3.5 hours** for the 6-person test team.
- Updated FMEA rows and safety requirements for **ISO 26262** ASIL B functions, and closed **27** findings from the carmaker's **ASPICE** Level 2 assessment before the C-sample review.

Cummins — **Systems Engineering Intern** — Columbus, IN · May 2022 to Aug 2022

- Wrote **22** requirements for an aftertreatment sensor subsystem and traced them to the parent engine controller requirements in **DOORS**.
- Built a **Simulink** model comparing **3** NOx sensor placements on response time and cost, which the team used to pick the layout at the design review.
- Wrote **35** test procedures for the sensor's fault detection on the engine test cell, with pass and fail criteria tied to each requirement.