

GIL NAVA ZARAGOZA

Switch Applications Engineer | Automotive Systems Engineer | MSc Engineering Business Management

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Location: Mexico | Open to global opportunities

SUMMARY

Automotive Systems Engineer with 7+ years of experience in vehicle launches and system integration. Specializes in software validation, controls, and automation, with proficiency in Python, MATLAB/Simulink, and C for diagnostic tools, test automation, and data analysis. Skilled in CAD/CAE modeling, simulation, and troubleshooting complex embedded systems. Strong background in powertrain, infotainment, and steering applications, driven by a passion for optimizing processes and delivering reliable automotive solutions.

PROFESSIONAL EXPERIENCE

Ford – Switches Applications Engineer (Nov 2023 – Present)

- Managed 5 vehicle line programs resolving issues in switch application systems, improving on-time quality delivery by 25%.
- Drove cost and complexity reduction initiatives (> USD \$2.5M annual savings during production phase).
- Developed and presented ICA/PCA analyses to mitigate interior switch-related build disruptions.
- Led 25MY new model launch support at Kentucky and Ohio Truck Assembly Plants (8 months Louisville, 4 months Cleveland).
- Directed cross-functional interior assessments (Appearance Approval, Blue Tag, Studio reviews) ensuring harmony & compliance.
- Audited BOM and managed engineering change control to maintain accuracy and regulatory compliance.

Ford – Steering Applications Engineer (Nov 2022 – Nov 2023)

- Coordinated validation and maintenance of EPAS systems (column, intermediate shaft, floor seal, gear & linkage, heat shield) with NA/EU teams.
- Monitored warranty trends and drove design improvements with suppliers (Bosch, ZF, Thyssenkrupp).
- Owned delegated part BOM integrity and engineering change traceability.
- Analyzed impact of proposed design and production changes on performance and compliance.
- Supported EPAS running changes in production at Hermosillo Assembly Plant.
- Submitted innovation disclosures to enhance steering component designs.

Ford – Powertrain Controls Engineer (Jun 2021 – Nov 2022)

- Integrated subsystem calibrations for ICE and EV propulsion software meeting global emissions standards.
- Developed calibrations for ECU-controlled actuators and sensors (PCM, TCM, DLCM) using Candela Studio and CANape.
- Reduced calibration time by 25% through custom Python GUI tools.
- Maintained shared tools enabling collaborative data analysis.

Stellantis – EPS Design & Release Engineer (Oct 2020 – Jun 2021)

- Led EPS software readiness coordinating with suppliers and internal product engineering.
- Developed and validated DVP&R with steering suppliers (ZF, Nexteer).
- Supported End-of-Line and vehicle dynamics calibration activities.
- Provided chassis engineering support for pilot launches (RAM ProMaster ICE/EV 2023, RAM 1500/2500 2023).
- Audited and updated BOM to reflect engineering changes (DCR / TVM / SQ).

Ford – Infotainment & Connectivity Engineer (May 2018 – Oct 2020)

- Verified connectivity across ECUs (TCU, IPC, SYNC/APIM, BCM) aligned with global architectures and specifications.
- Identified FordPass application software defects via structured root cause analysis.
- Validated, reported, and tracked infotainment software bugs using CAN, CAN FD, Ethernet, and LIN protocols.
- Reviewed engineering change proposals responding to prior authentication findings.
- Mentored junior engineers through training and technical guidance.

CERTIFICATIONS

Six Sigma Green Belt · HEV Electrified Powertrain Calibration · ISTQB · Python Programming Masterclass · Agile & Scrum · Microsoft Office Advanced

EDUCATION

Master's in Engineering Business Management – Universidad Anáhuac México Norte (2023 – 2025)

Automotive Systems Engineering – Instituto Politécnico Nacional (2013 – 2017)

TECHNICAL SKILLS

CAD/CAE: CATIA V5, NX, SolidWorks, Abaqus, Adams, Ansys, 3DX | **Validation:** CANalyzer, Candela, Ford Diagnostic Eng. Tool, Ford HMI, Simulink, Matlab, Teamcenter, WERS

Programming: Python (automation/UI), MATLAB scripting, IntelliJ, GitHub, Copilot, Ford Telematics Protocol |

Methods: Six Sigma, 8D/5D, Ishikawa, Agile, Scrum Master

Languages: Spanish (Native), English (Professional)

SOFT SKILLS

Communication · Teamwork · Creativity · Leadership · Dedication

CORE COMPETENCIES

System Integration; Embedded Diagnostics; Validation Planning; Data Analysis; Calibration; Continuous Improvement; Launch & Software Readiness; Change Control; Root Cause; Supplier Coordination; Process Optimization.

TOOLS & METHODS

DCR / TVM / SQ change control; Calibration support; Traceability; KPI tracking; Continuous Improvement; Supplier liaison.