Raghavendra Sriram

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Technical Interests: On Board Diagnostics (OBD), Data Optimization, Process Development, Product Development, Control Systems, Autonomous Vehicles (UAV), Machine Learning, Gen AI, LLMs, Program Management, Governance , Audit Controls , Compliance Frameworks, Risk Mitigation, Resource Planning.

Professional Experience

Diagnostic Calibration - Expat Assignment (2 years) *April 2025 – April 2027*
DAF Trucks NV, Eindhoven, Netherlands.

- Led the end-to-end program rollout of new misfire detection strategies across PACCAR P14 platforms, driving alignment between suppliers, hardware teams, development engineers, and validation groups.
- Established program governance mechanisms (milestones, risk logs, KPIs) to improve visibility for senior leadership, enabling data-driven decisions and predictable delivery.
- Managed cross-functional risk reviews, identified compliance gaps, and implemented mitigation plans to ensure regulatory readiness across multiple global stakeholders and teams.
- Developed process pipelines and operating mechanisms that improved tracking, reduced program slippage, and enabled smoother deployment of new OBD software.

Sr Test and Development Engineer – OBD Misfire Lead *Apr 2020 – Present*
Paccar Technical Center, Mt Vernon, Washington.

- Owned calibration readiness for MY22–MY27 engines, ensuring compliance with NA/EU emissions regulations through structured risk assessments, requirement reviews, and audit documentation.
- Evaluated test cell operational risks, defined corrective actions, and improved process reliability for critical regulatory testing workflows.
- Authored functional requirements for new diagnostic technologies and ensured traceability between requirements, validation, and compliance evidence.
- Improved cross-regional collaboration by streamlining communication channels and standardizing documentation practices used for audits and certification.

Diagnostic Calibration Engineer Expat Assignment (6 months) *Jul 2023 – Jan 2024*
DAF Trucks NV, Eindhoven, Netherlands.

- Spearheaded the development of engine misfire diagnostic calibration to comply with stringent North American (NA) and European Union (EU) regulatory standards for Heavy Duty diesel engines for model years 2022 through 2027.
- Conducted comprehensive evaluations and provided strategic guidance for test cell operations, ensuring optimal performance of diesel engines.
- Analyzed engine emissions and performance data, utilizing MATLAB and ATI Vision to develop advanced data processing tools.
- Defined the functional requirements for innovative technology systems, laying the groundwork for future product and system implementations.
- Streamlined diagnostic development procedures, facilitating seamless collaboration between NA and EU teams, and introduced innovative processes to enhance resource allocation and communication channels.

On Board Diagnostics Engineer (CES Controls) *Jan 2018 – Mar 2020*
Cummins Inc., Columbus, Indiana.

- Managed system integration and calibration deliverables across multiple on/off-highway programs; ensured compliance with diagnostic requirements and quality gates.
- Supported OEM readiness audits and delivered calibration artifacts, test evidence, and risk assessments.
- Applied Six Sigma and FMEA methodologies to identify system-level risks and build mitigation plans.
- Built automation tools reducing software data extraction time by 80%, improving audit readiness and reducing human error.
- Conducted aftertreatment diagnostic calibration (PFS/SCR), ensuring functional safety and regulatory compliance.

Academic:

Master's in Business Administration (GPA: 3.8/4) *2024 - Present*
The University of Illinois – Urbana Champagne (Expected Graduation – June 2026)

Masters in Electrical Engineering (GPA: 3.82/4) *2012 - 2017*

The University of Texas at Arlington

MS Thesis: *Multi source UAV based object classification using CNN's and Data acquisition system for Robotic Skin*

- Graduate Research Assistant (University of Texas Research Institute) *2013 - 2017*
- Graduate Teaching Assistant (University of Texas at Arlington) *2014 – 2017*

Bachelor's in Electrical and Electronics Engineering (GPA: 3.8/4) *2008 - 2012*

Visveswaraya Institute of Technology

Patent: Business Transaction Information Association Processing Method, Platform and Processing System. **(Issued)**

Certifications: Diesel Engine Technology OnDemand **PD730812(SAE)** Certificate earned on October 8, 2021

: Algorithms for Battery Management Systems Specialization (University of Colorado Boulder Coursera) (**Ongoing)**

: Deep Learning by DeepLearning.AI on Coursera. Certificate earned on April 9, 2020

Research and development Projects as Graduate Research Assistant and after (refer **Website** for more details)

AurumAI – Enterprise AI Execution & Governance Platform

Internal Audit / Technology Risk / Governance

- Designed and implemented **enterprise AI governance controls**, including policy enforcement, role-based access, audit logging, and cost controls to support auditability and regulatory compliance.
- Established **end-to-end traceability of AI activity** through invocation logging, policy lifecycle management (versioning and rollback), and cost reporting to enable audit-ready operations.
- Integrated **automated compliance controls** into AI execution workflows, supporting evidence collection, control testing, and management assurance.

OptimaLLM – AI Cost Optimization & Governance Proxy

Internal Audit / IT Controls / FinOps Governance

- Designed and implemented **automated monitoring and cost controls** over AI usage to mitigate financial and operational risks associated with enterprise LLM adoption.
- Enabled **full request-level traceability, usage analytics, and budget enforcement**, supporting internal audit reviews, continuous monitoring, and management reporting.
- Developed an **explainability and audit graph framework** to ensure reproducibility, accountability, and defensibility of AI-generated outputs.

SLM Forge – On-Device AI & Privacy-First ML Platform

Risk Management / Data Governance / Compliance

- Developed a **privacy-preserving AI platform** enabling local model training and inference to address data residency, confidentiality, and regulatory requirements.
- Embedded **preventive risk checks, reproducibility artifacts, and controlled export mechanisms** to support auditability and secure deployment of AI models.
- Designed the platform for **regulated environments**, ensuring strong data governance, limited data exposure, and verifiable audit evidence.

QuantTradeAI – AI-Driven Financial Analytics Platform

Risk Assessment / Data Integrity / Audit & Compliance

- Built an AI analytics platform incorporating **financial risk metrics, AI-assisted analysis, and immutable audit trails** to support governance and assurance activities.
- Implemented **data provenance controls**, including SHA-256 audit logging, trust graphs, and role-based access, to ensure integrity and explainability of analytics outputs.
- Delivered **audit-aligned risk analytics** (VaR, CVaR, stress testing, regulatory filings analysis) supporting risk management and oversight functions.

AetherOS – AI-Native Operating System (Research Prototype)

Technology Risk / Secure Architecture / Control Design

- Architected an AI-native system prototype applying **policy-driven control concepts** to autonomous resource management, demonstrating risk-aware system design.
- Designed **data retention, access governance, and automated cleanup controls**, applying internal control principles to low-level system operations.
- Demonstrated deep understanding of **secure architecture, resource governance, and resilience**, informing risk and control evaluations of advanced technologies.

Object classification and tracking using TensorFlow and Convolutional Neural Networks (CNN):

· Led the development of a multi-class object classifier and tracker for a swarm of UAV video feeds, utilizing TensorFlow and Convolutional Neural Networks (CNNs) deployed on a modified S1000 octa-rotor UAV powered by an NVIDIA Jetson TX2 module.

Autonomous formation flight control for multiple aerial vehicles:

· Multi agent consensus algorithms on several micro air vehicles and formation flights in various patterns in a 3D motion capture VICON system environment.

Development of custom data acquisition board to develop smart skin cells:

· Designed a data acquisition board and prototype robotic skin modules for data acquisition from over 20 different sensor systems with a NI CRio system.

Skills and Tools

Programming languages and scripts: MATLAB, Python,

Technical Software and OS: ATI Vision, INCA, Matlab, Simulink, Claude Code, Tableau.

Publications:

- **Co Author**: Security of unmanned aerial vehicle systems against cyber physical attacks. The Journal of Defense Modeling and Simulation: Applications, Methodology, Technology, 1548512915617252.
- **Co Author**: Artificial Intelligence and Machine Learning for EDGE Computing (expected publication: December 2021)