



Sravani Hukumathi Venkata

Data Scientist | 11 Years Automotive Expertise | Sorbonne Data Science Certified

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[LinkedIn](#) | [Anomaly_detection](#)

SUMMARY

Aspiring Data Scientist leveraging 11 years of technical expertise in software development and a recent comprehensive certification in Data Science. Proficient in Python, predictive modeling, and real-time anomaly detection. My background in Automotive Industry with high-performance engineering has conditioned me to write efficient code and handle complex datasets with precision. I am looking to leverage my mix of professional maturity and new analytical skills to drive data-led decision-making in a dynamic environment.

SKILLS

Data Science & Machine Learning: LLMs (LangChain), RAG Architecture, Computer Vision, Time Series, Anomaly Detection, Classification, Regression, Clustering, PCA, Feature Engineering

Deep Learning & Neural Networks: Keras, PyTorch, TensorFlow, CNNs, DNNs, Transformers, Reinforcement Learning, Computer Vision

Programming Languages: Python, SQL, C++, Embedded C

Embedded Systems AUTOSAR, CAN, CANFD, LIN, FlexRay, Ethernet, Microcontrollers (Tricore, RH850)

Soft Skills: Strategic Stakeholder Communication, Technical Mentorship, Agile Leadership

Tools, Platforms & Libraries: Github, Docker, AWS (basics), Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, Plotly, Linux Command Line, Streamlit, Davinci Configurator

Others: Data APIs, Web Scraping (BeautifulSoup), Graph Theory, Network Analysis

PROJECTS

CAN Bus Anomaly Detection (AI Safety)

Methods Used: The notebook employs an ensemble of unsupervised learning models, primarily Isolation Forest (for DoS detection) and Local Outlier Factor (LOF) (for Fuzzy anomaly detection), enhanced by a Heuristic Priority Logic, most notably the 'New ID Priority' rule, to accurately distinguish attack types.

Features Used: Key features for DoS detection include frequency_hz and log_iat, while Fuzzy detection relies on payload analysis through rolling_volatility, hamming_dist, and the critical is_new_id flag. General message attributes like can_id_dec and dic are also incorporated.

Outcome: The result is a robust anomaly detection system achieving high performance across all classes,

specifically Fuzzy attack recall of ~97.6%, DoS attack precision of ~98.8%, and normal frame recall of ~99.9%.

Demonstrated the ability to detect various attack types, including DoS and Fuzzy attacks, by analyzing CAN ID frequency, inter-arrival times, and payload characteristics.

PROFESSIONAL EXPERIENCE (LAST 11 YEARS: AUTOMOTIVE EMBEDDED SYSTEMS)

Project Lead | Montbleu Technologies GmbH, Germany

Aug 2021 – Feb 2025

Directed full-cycle AUTOSAR MCAL adaptation for next-gen hardware, ensuring 100% OEM alignment.
Engineered high-performance multicore solutions, optimizing data throughput.
Spearheaded integration of safety-critical watchdogs, significantly enhancing system reliability.
Acted as technical bridge between customer requirements and execution for Tier-1 partners.

Lead Engineer | Avin Systems GmbH, Berlin

Sep 2019 – July 2021

Orchestrated BMS development for Mercedes-Benz, steering architecture for energy efficiency.
Delivered AUTOSAR-compliant stacks, reducing system integration time and ensuring safety.
Mentored 5 junior engineers, resulting increase in team coding efficiency.

Senior Software Engineer | KPI Technologies GmbH, Munich | KPI Technologies Pvt Ltd, India

Oct 2013 – June 2019

Developed safety-critical software for BMW and Continental for millions of production vehicles.
Mastered CAN/FlexRay protocols, establishing the foundation for advanced data analysis.
Architected software designs to streamline integration and reduce development cycles.

EDUCATION

Advanced Data Science Training

Université Paris Panthéon-Sorbonne | Sep 2025 - Dec 2025

Bachelor of Engineering

B.V.B College of Engineering, India | 2009 – 2013

LANGUAGES

English (Fluent), German (B2), Telugu (Native), Kannada, Hindi