GANASEKHAR KALLA

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PROFESSIONAL SUMMARY

Driven Machine Learning & Data Science enthusiast with expertise in designing and deploying end-to-end ML pipelines and scalable AI solutions. Skilled in advanced feature engineering, cloud deployment, and extracting actionable insights to solve complex business problems. Passionate about leveraging cutting-edge AI technologies to optimize processes and deliver measurable impact. Committed to continuous learning and innovation to translate data into strategic value.

SKILLS

- Programming Languages: Python, Java, C
- Data science & ML: Machine Learning, Deep Learning, NLP, LLMs, Neural Networks, Feature Engineering, Reinforcement Learning, Unsupervised Learning, Ai Agents, Model Context Prtocol(MCP).
- Data analytics & BI: Power BI, SQL, Tableau, Excel, Pandas, NumPy, Spark, Seaborn, Matplotlib
- Tools & Frameworks: Git, FastAPI, Docker, MongoDB, Pymongo, kafka, Databricks, Kubernetes, PostgreSQL, AWS, Azure

EDUCATION

- Electronics and Communication Engineering | National Institute of Technology Nagaland — CGPA: 7.80 | (Aug '22 – May '26)
- XII (BSEAP) | NRI Junior College, Visakhapatnam, Andhra Pradesh — 84.1% | 2020

EXPERIENCE

AI TRANSFORMATIVE LEARNING | Microsoft | Edunet Foundation, Virtual [Python, ML, NLP] (feb'4 -march'4)

- Researched and applied machine learning and NLP techniques to develop adaptive learning models.
- Implemented and fine-tuned algorithms to improve model accuracy, learning efficiency, and decision-making under dynamic conditions.
- Collaborated with cross-functional teams to drive AI-powered innovations in transformative learning.

DATA ANALYTICS INTERN| Edunet Foundation, Virtual [Python | Spark | Numpy | Seaborn | Matplotlib] (Oct '24 – Nov '24)

- Cleaned, transformed, and analyzed large-scale datasets using Python and Spark to extract actionable business insights.
- Developed compelling visualizations and reports that effectively communicated key trends and findings to stakeholders.
- Collaborated with cross-functional teams to optimize data workflows, improving efficiency and project deliverables.

ACADEMIC PROJECTS

Reinforcement Learning-Driven Smart Supply Chain Optimization using Stable-Baselines3(RL-Agent | Operations Research)

- **Developed a PPO-based RL system to optimize supply chains under demand uncertainty and routing constraints.**
- **Simulated real-world logistics using a custom Gym environment with demand clustering and TensorBoard training monitors.**
- **Improved inventory allocation and routing, minimizing costs and demonstrating RL's value in operations research.**

Context-Aware AI Assistant for EdTech using LLAMA and MCP(Python | Docker | GitHub | Json | APIs)

- Developed an AI Agent using LLaMA 3 (OpenAI-hosted) and Model Context Protocol (MCP) to deliver real-time, context-aware assistance in EdTech platforms like Sunbird Ed.
- Designed modular tool schemas with dynamic context injection for personalized, multi-user interactions across course, profile.
- Integrated mock APIs and CLI-based validation to simulate agent behaviors and ensure accurate, MCP-compliant responses in structured environments.

Real-Time Credit Card Fraud Detection System(ML Pipeline| Kafka | Docker | FastAPI | Unsupervised Learning | MongoDB)

- Built a real-time fraud detection system that leverages streaming data to identify and prevent anomalous financial transactions. Engineered live data processing and unsupervised learning models to detect fraud patterns at scale, enhancing financial security and accelerating incident response.

OPEN SOURCE CONTRIBUTIONS

Braindecode – Contributor | Deep Learning for EEG Signals | April 2025

- Implemented dynamic tag-based filtering with jQuery and DataTables, enhancing UI interactivity for model selection.
- Resolved aggregation logic bugs in dropdown filters, improving accuracy and usability of the model explorer.
- Enhanced frontend documentation using reStructuredText, JavaScript, and HTML/CSS; collaborated with maintainers to merge PR into the main branch.
- [Merged Pull Request]

MNE-Python – Contributor | Neurophysiological Data Analysis Library | April 2025

- Enhanced ICA comparison example by integrating FastICA, infomax algorithms to benchmark decomposition performance.
- Simulated noisy MEG data and visualized side-by-side EOG components, improving interpretability and instructional value.
- Collaborated with maintainers via early PR feedback to refine evaluation metrics and strengthen documentation.
- [Pull Request]