M V S ANIRUDH, MAGANTI

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PROFESSIONAL SUMMARY

AI/ML Engineer with 6+ years of experience designing and deploying machine learning and generative AI solutions across HR, finance, marketing, and manufacturing. Specialized in building LLM-powered applications (LangChain, RAG, Vector DBs), multimodal deep learning models, and production-grade ML pipelines on AWS and GCP. Proven record of delivering measurable business outcomes—such as boosting churn prediction accuracy by 20% at ADP and reducing fraud investigation times by 40%. Adept at MLOps (SageMaker, MLflow, Kubeflow, CI/CD) and translating cutting-edge research into scalable enterprise solutions.

SKILL SET

- **Programming**: Python (Pandas, NumPy, Scikit-learn, PyTorch, TensorFlow, Keras), SQL, R (basic), Linux.
- **AI/ML**: Supervised/Unsupervised Learning, Gradient Boosting, NLP (BERT, DistilBERT, GPT, RAG, LangChain, FAISS, Pinecone), LLM Fine-tuning, Deep Learning (CNN, U-Net, LSTM, GRU), Bayesian Analysis, Time Series Forecasting, Anomaly Detection.
- **MLOps & Deployment**: AWS (SageMaker, Lambda, EKS, S3, Feature Store), GCP (Big Query, Vertex AI), Docker, Kubernetes, MLflow, Kubeflow, CI/CD (Jenkins, GitHub Actions), Flask, FastAPI.
- **Data Engineering**: Apache Spark, Airflow, Kafka, ETL Pipelines.
- **Visualization**: Power BI, Tableau, Matplotlib, Seaborn.

EXPERIENCE

ADP

AI/ML Engineer. **Dec 2023 – Aug 2024**

- Built LLM-powered HR assistant using GPT-4 + LangChain with RAG (Pinecone/FAISS), improving query resolution by 30% and reducing escalations by 25%.
- Deployed churn prediction pipelines on SageMaker, increasing predictive accuracy by 20% and automating retraining with Feature Store + CI/CD workflows.
- Designed real-time ETL pipelines with Spark and Kafka, delivering instant workforce insights into HR and payroll metrics for enterprise clients.
- Implemented ARIMA/Prophet models to forecast payroll volumes, reducing processing lag times by 15% and optimizing resource allocation.
- Created anomaly detection models (isolation forests/ autoencoders) boosting payroll fraud detection accuracy to 95% and cutting investigation time by 40%.
- Automated payroll and HR reporting with Natural Language Generation, halving report generation time and delivering actionable insights.
- Deployed models using Docker and Jenkins CI/CD pipelines, reducing deployment time by 40% with robust version control.
- Utilized SHAP for explainable AI in payroll decisions, ensuring transparency and compliance with ethical AI standards.

Taylor Corporation

AL/ML Engineer **Feb 2023 - Nov 2023**

- Developed GenAI-powered recommender system using LangChain + RAG (Pinecone), boosting engagement by 20% through personalized content delivery.
- Built multimodal ML pipelines (PyTorch + PySpark + MLflow) with Flask APIs, streamlining model deployment by 25% and enabling rapid iteration.
- Automated AWS Lambda functions & Snowflake ETL jobs for Adobe Analytics, improving data processing efficiency by 15% for marketing insights.
- Created a real-time chatbot with Azure Bot Service + LangChain, boosting response accuracy by 30% via advanced NLU capabilities.
- Designed Power BI dashboards to monitor ML model performance, leveraging Apache Airflow for efficient batch data processing.
- Managed the ML lifecycle with Kubeflow + CI/CD (Docker, GitHub Actions), enabling scalable model training and experimentation for product teams.
- Collaborated with product teams in Agile sprints, improving project delivery timelines by 20%.

Hyundai Motor India Engineering Pty Ltd

Data Scientist, **Jul 2019– Dec 2022**

- Built time-series demand forecasting with Python + SQL, improving production planning accuracy by 13%.
- Applied simulation-driven design analytics to evaluate component reliability using past model data and virtual testing, accelerating product development and reducing prototype testing cycles.
- Developed ML-powered defect detection systems on assembly lines using sensor data, minimizing quality control failures and optimizing inspection workflows.
- Built predictive maintenance models for manufacturing machinery using IoT data and historical downtime trends, boosting equipment uptime and reducing unplanned stoppages.
- Led integration of sensor fusion pipelines (cameras, vehicle telemetry, ADAS data) to drive next-gen safety and autonomy features.
- Analyzed connected car data and telematics to improve infotainment personalization, remote diagnostics, and customer engagement.
- Collaborated on customer behavior modeling to inform product feature enhancements and targeted marketing campaigns.
- Partnered with cross-functional teams to operationalize predictive models and dashboards, enabling real-time insights for product, engineering, and supply chain

PROJECTS AND ACADEMIC ACHIEVEMENTS

Metaphor Detection (NLP): Developed a DistilBERT-based model to detect metaphors in text, achieving a state-of-the-art NLU loss of 0.045 using Python and TensorFlow.

Crop row and Leaf Segmentation (Deep Learning): Built U-Net models achieving 85% accuracy in crop row detection and 97% in leaf segmentation, enabling precise yield assessment and optimized planting.

Click-Through Rate Prediction | Marketing Campaign Optimization: Developed a click-through rate prediction model on highly imbalanced marketing data (~1.6% positive rate), optimizing for log loss and calibrated probabilities rather than raw classification accuracy, ensuring reliable ranking of high-intent users.

Bayesian Health Insurance Cost Prediction: Developed a Bayesian model using MCMC for predicting health insurance costs; achieved R-squared of 0.89 and RMSE of 0.46 using Python and R.

Other Projects: Financial and HR Attrition Dashboards (Power BI, Tableau), Sales Dashboard (Power BI):, Credit Card Financial Dashboard (Power BI and SQL Server):

EDUCATION

Purdue University, *Master of Science* Jan 2023 – Dec 2024 | USA

- Major : Computational Data Science (Computer Science & Mathematics)
- GPA: 3.5/4.0, Dean's Scholarship Recipient

Gayatri Vidya Parishad College of Engineering, *Bachelor of Technology* Jun 2015 – May 2019 | India

- Major : Mechanical Engineering
- CGPA: 8.63/10.00, Full-ride scholarship