Yashwanth Telukuntla

Machine Learning Engineer

(218) 277-2215 | yashwanth.t808@gmail.com | Katy, TX | LinkedIn

Professional Summary

Experienced Software Engineer with around 6 years, with 2+ of expertise in ML and 1+ in Generative AI. Proficient in Python, TensorFlow, and PyTorch, with a Knowledge in Data Science, Deep Learning and Natural Language processing (NLP) to Gen AI. Hands-on experience with cloud platforms (AWS). Skilled in preprocessing the structured and unstructured data, feature engineering, and model deployment. Strong analytical skills, adaptable to rapidly evolving AI technologies, and adept at solving complex problems in Data Structures. Solid foundation in mathematics, software engineering principles, architecture and Agile Methodology.

Technical Skills

Programming Languages: Python (Object oriented Programming), Java, YAML, JSON, HTML, CSS

Databases: MySQL, Pinecone, Oracle, GraphRAG, Neo4j, DynamoDB

Frameworks: Keras, Scikit-learn, Fast API, Streamlit, Django, Flask, NumPy, pandas, SciPy, Llama Index, NLTK, spaCy, OpenCV

Visualization and Version controls Tools: Tableau, Power BI, Plotly, matplotlib, Git, GitHub, GitLab

Cloud: AWS(S3, Lambda, Bedrock, SageMaker, CloudWatch), GCP, Azure

Other Skills: Statistical Modeling, Computer vision, Interpersonal skills, Problem solving, information retrieval, MapReduce, Pyspark

Work Experience

Client: American National Insurance Company, **Galveston, Texas, USA** **Jul 2023 - Present**

Role: Sr. Machine Learning Engineer

Responsibilities:

- Designed and developed Generative AI solutions using Llama 2, LangChain, and LangSmith frameworks, increasing user engagement and experience by 25%.
- Adopted advanced chunking techniques, vector embeddings, Vector Databases and search techniques like semantic search to improve performance of Retrieval-Augmented Generation (RAG) by 30%.
- Implemented advanced prompt engineering techniques, to improve quality and relevance of generated content by 40%, and experimented with various prompt structures to guide models towards specific behaviors and responses.
- Fine-tuned transformer-based models like Llama 2 and other open-source models for domain-specific applications, Monitored and Logged LLM inference with LangSmith and CloudWatch to monitor inference latency and hallucination.
- Built and enforced robust AI Security with input/output guardrails to ensure large language models (LLMs) generated content adhered to safety and ethical guidelines, reducing inappropriate Content by 35%.

Client: Methodist Health System, **Dallas, Texas, USA** **Nov 2021 - Jun 2023**

Role: Machine Learning engineer

Responsibilities:

- Performed data cleaning, normalization, and transformation to prepare raw data for analysis, increasing data quality and utilizing libraries such as Pandas and NumPy, resulting in a 20% improvement in data accuracy.
- Conducted exploratory data analysis (EDA) leveraging visualization tools Matplotlib and Seaborn to identify patterns, trends, and anomalies in data, leading to actionable insights that informed strategic decisions.
- Developed and implemented feature engineering techniques to increase model performance, including one-hot encoding, scaling, and dimensionality reduction, contributed to a 15% increase in model efficiency.
- Employed feature selection methods (e.g., Recursive Feature Elimination, Lasso) to identify most impactful features, improving model interpretability and reducing training time by 25%.
- Trained models using MLflow for experiment tracking and versioning, leveraging Azure Databricks for hyperparameter optimization through grid search and random search, resulting in a 15% increase in predictive accuracy.

- Performed rigorous model evaluation techniques, including cross-validation, confusion matrix analysis, and ROC-AUC metrics, achieving a model validation accuracy of over 90%, with precision and recall rates exceeding 85%.
- Mentored junior engineers and graduate students in ML and AI concepts, fostering a collaborative environment and promoting knowledge sharing within the team.

Client: Deutsche Bank, **Bangalore, India** **Mar 2020 - Jul 2021**

Role: Machine Learning Engineer

Responsibilities:

- Implemented comprehensive MLOps pipelines with integrated CI/CD workflows that automated end-to-end lifecycle of machine learning models, including data collection, cleaning, preprocessing, transforming, training, validation, deployment, and monitoring, enhancing efficiency and reducing time-to-market.
- Ensured data security and compliance by implementing robust access controls, encryption methods, and data governance practices, adhering to industry standards and regulatory requirements to safeguard sensitive information and maintain data integrity.
- Collaborated with product managers, data engineers, and operations teams to collect data from internal systems and ensure it met analytical requirements. Conducted thorough code reviews and debugging sessions with team members to maintain code quality, optimize data pipelines, and swiftly resolve issues.
- Utilized containerization technologies such as Docker and orchestration tools like Kubernetes to deploy and scale machine learning applications efficiently, ensuring high availability, scalability, and streamlined resource management in production environments.
- Served ML models via RESTful APIs to integrate with front-end applications, enhancing accessibility and user experience.
- Conducted extensive data preprocessing and feature engineering using techniques normalization, dimensionality reduction, feature selection, and embedding generation, ensuring high-quality inputs for machine learning models and improving overall model performance.

Client: Schneider Electric, **Bangalore, India** **Jun 2018 - Feb 2020**

Role: Software Engineer

Responsibilities:

- Designed and implemented RESTful APIs for seamless frontend and backend integration.
- Data stored in sqlite3 datafile (DB.) were accessed using python and extracted metadata, tables, and data from tables and converted tables to respective CSV tables.
- Converted data from PDF to XML using python script in two ways i.e. from raw xml to processed xml and from processed xml to CSV files.
- Used Beautiful Soup for web scraping (Parsing data).
- Understanding business problems and analyzing data by using Statistical models to generate insights.
- Designed and optimized database schemas to enhance query performance and data integrity.

Education

University at Albany, SUNY, Albany, New York, USA

Master of Science in computer science (Concentration in AI/ML)

Certifications

Generative AI Professional (Oracle)

Machine Learning specialization (Coursera)