

Avijeet Ranawat

+14042039047 | avijeet96@gmail.com | linkedin.com/in/avijeetranawat

Professional with more than 5 years of work experience in Machine Learning & Generative AI. Proven expertise in developing and deploying machine learning models in production, with a strong foundation in LLMs. Skilled in cloud platforms and MLOps tools.

Experience

Kwaai, Generative AI Engineer

Jul 2024 - Present

- **GPTLens (AI in Finance):**

- Objective: Fine-tune Llama, OpenAI GPT pretrained LLM models to prevent cybersecurity threats.
- Approach: Utilized Python, LangChain, RAG, VectorDB, Chatbot, HuggingFace Spaces.
- Outcome: Improved vulnerability detection for Blockchain codes using LLM Chain of Thoughts.

- **Hateful Memes Detection (AI in Media):**

- Objective: Developed a deep learning model to analyze combined embeddings of images and text.
- Approach: Utilized Python, PyTorch framework, NLP, CV, parallel processing on GPUs.
- Outcome: Created a multimodal BERT model capable of detecting hateful memes.

Fractal Analytics, Machine Learning Engineer

Nov 2021 - Jul 2023

- **Insights Generation:**

- Objective: Develop an unsupervised ML model to identify patterns in large dataset containing billions of records.
- Employed Python, PyTorch, clustering for modeling; data vectorization through Transformer embeddings.
- Deployed the model in Docker containers, MLOps distribution with Kubernetes, infrastructure on GCP.
- Optimized data engineering tasks utilizing SQL and BigQuery. Along with robust system design.
- Outcome: Enabled a 80% improvement in insight generation for the marketing team.
- Designed and developed prototypes and proof of concepts for new ML solutions.
- Conducted experiments to enhance the accuracy and efficiency of ML models.

- **Causal Impact Analysis:**

- Objective: Employ A/B testing framework to analyze the causal impact on business revenue.
- Conducted ETL and data preprocessing with Python, Numpy, Pandas, and Spark.
- Applied statistical methods like hypothesis testing and T-tests, comparing test and control groups.
- Visualized results on PowerBI and Tableau dashboards. Created reports with plotly.
- Outcome: Enabled clients to strategically reduce costs by 25%.
- Conducted performance tuning and model optimization to ensure real-time analytics capabilities.
- Collaborated with cross-functional teams to integrate insights into business workflows.

Tata Consultancy Services, Software Engineer

Jul 2018 - Oct 2021

- **Query Categorization:**

- Objective: Develop a supervised Machine Learning model for issue categorization.
- Utilized python, sklearn, spaCy, and NLTK to build a custom NLP entity recognizer.
- Built Random Forest model for feature engineering and feature selection, integrated into an end-to-end ML pipeline.
- Deployed on Azure, providing the model as a scalable API service.
- Outcome: Achieved a 50% improvement in inference of customer issues.
- Designed and implemented a feedback loop to continuously improve model performance.
- Conducted regular model maintenance and updates to adapt to evolving customer query patterns.

Education

Masters in Computer Science, Georgia Institute of Technology | Atlanta, USA

2023 - 2024

Bachelors in Computer Science Engineering, Rajiv Gandhi Proudhyogiki Vishwavidyalaya | Indore, India

2014 - 2018

Courses: Algorithms & Data Structures | Artificial Intelligence | Machine Learning | Deep Learning | Computer Vision | Large Language Models | Big Data Health | AI Robotics | ML Trading | Natural Language Processing | Scientific ML | Management for Engineers

Skills

Programming	Python, PyTorch, TensorFlow, Java, SQL
Machine Learning	Linear Regression, Logistic Regression, Decision Trees, Random Forest, XGBoost, Clustering, AutoML
Deep Learning	Neural Network, Transformers, RNN, LSTM, CNN, Reinforcement Learning
Generative AI	LLM, RAG, LangChain, LangServe, LangSmith, GAN, Fine tuning
NLP	spaCy, NLTK, NLU, NLG, HuggingFace, PEFT, RLHF, Model Interpretability
BigData	NoSQL, Hadoop, Spark, Kafka, BigQuery, Airflow, Databricks, Snowflake
Database	Vector DB, MySQL, Mongo DB, Elasticsearch, Pinecone, Milvus, Faiss
Cloud	AWS, GCP, Azure, VertexAI, SageMaker
Deployment	Docker, Kubernetes, MLOps, CI/CD Pipelines, MLflow, GPU
Soft Skills	Excellent Communication, Presentation, Teamwork, Open Source Contributions
ML Skills	Model Training, Model Deployment, Feature Engineering, Hyperparameter Tuning, Model Evaluation, Data Preprocessing, Model Optimization, Pipeline Automation
CS Skills	Object Oriented Programming, Distributed Computing, Performance Optimization, Scalability, System & Architecture Design, API Development, C/C++, JAX, Rust
DS Skills	Predictive Analytics, Recommendation Systems, Fraud Detection, Time Series Forecasting, Customer Lifetime Value, Risk Management, Supply Chain, Marketing