Rohit Ashok Mahamuni

Gen AI Engineer

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Profile

Results-driven **Generative AI Engineer** with over **4+ years of experience** in developing and deploying innovative AI models. Proficient in **advanced deep learning techniques**, including **Generative Adversarial Networks (GANs)** and **natural language processing (NLP)**, aiming to drive impactful AI solutions across diverse applications. Demonstrated ability to enhance creative processes through advanced algorithms, optimizing user engagement and experience.

Professional Experience

Gen AI Engineer, *POSCO*
2020 Nov – present
Pune, India

- **Developed** state-of-the-art generative AI models (GPT-3 and custom fine-tuned transformers) for natural language processing (NLP) tasks.
- **Implemented deep learning algorithms** using frameworks such as TensorFlow, PyTorch, and Hugging Face to build, fine-tune, and optimize generative models, improving model accuracy.
- **Collaborated with cross-functional teams** (data scientists, product managers, and software engineers) to integrate generative AI solutions into production systems, contributing to the enhancement of business products like automatic problem distribution to specific department.
- Led the optimization of machine learning algorithms, achieving a 10% reduction in defective delivery and enhancing model performance through hyperparameter tuning and data augmentation.
- **Led knowledge-sharing sessions** and internal workshops on generative AI, providing guidance to junior engineers and fostering a collaborative environment for research and innovation.

Projects

Developed a generative AI system to automate the classification, prioritization, and routing of product next action across departments, *Implemented an AI model using NLP and sentiment analysis to categorize and prioritize complaints, improving response time by 40%.*
Developed and deployed a **Generative AI-based system** to streamline the handling of text-based comments for next action on product. The solution utilized NLP and machine learning models to automate the classification and prioritization of compments, ensuring faster resolution across departments (Reprocess,Packing,Recoling,Scrap,WIP) The AI system integrated with existing ticketing tools and continuously improved through feedback loops, significantly enhancing operational efficiency and reduce manual efforts.

Develop a Generative AI-powered chatbot to automate and streamline the retrieval of information from Standard Operating Procedures (SOPs) and formats, improving employee efficiency and reducing dependency on manual resources
Designed and implemented a **Generative AI-based chatbot** to handle employee queries related to Standard Operating Procedures (SOPs), guidelines, and document formats across the organization. The chatbot was built using advanced natural language processing (NLP) models to understand and respond to questions, pulling data directly from a knowledge base of SOP documents and templates. This solution enabled real-time, accurate, and context-aware responses, reducing the time spent by employees searching for information and minimizing errors in SOP interpretation.

10% reduction of Defective Delivery, by selection of proper vehicle for Transportation.,
Exploratory Data Analysis, Model Building
- Understand,Analyze and interpret the datasets received from data engineers.
- Conducted EDA to understand patterns and outliers, visualizing trends using matplotlib and seaborn.
- Select important features from dataset for model building.
- Build different models to predict proper vehicle for transportation.
- Hyperparamaeter tuning for improve accuracy of the model.
- Evaluate performance of model with classification evaluation techniques.

$3Lakh/yr cost saving by controlling zinc coating weight, *EDA, Feature engineering,Model building*
- Understand & Analyze data received from company databases system like MES , SCM & Operators Interviews.
- Assess the effectiveness of new data sources and data gathering techniques.
- Take useful insights from the data using different data preprocessing techniques.
- Use feature selection technique to select important features from the data.
- Build different models to predict the zinc coating
- Evaluation of model performance with classification
- Coordinate with different functional teams to implement & deploy models and monitor outcomes.

NaOH Consumption reduction, by controlling operating parameters., *EDA,Feature engineering*
- Data cleaning, visualizing & analysis for getting insights.
- Imputing null values, outliers etc., finding correlation between features, encoding features, and other related feature engineering.
- Analyzing the data (Univariate & Multivariate analysis) to find out related parameters affecting the consumption.

Skills

Python/ML Packages
NumPy, Pandas, Scikit-learn, Seaborn, Matplotlib, Flask.

Deep Learning
ANN, CNN,RNN,LSTM,GRU

Cloud Services
AWS. EC2, S3.

Database
SQL

GitHub
Github, Gitbash

Generative Models
GAN,Transformer architectures,BERT,Encoder,Decoder

Machine Learning
Linear regression, Logistic regression, Ridge & Lasoo ,Naive Bayes classifier, KNN, Decision tree, Random Forest, Ada Boost, X G Boost, SVM, K Means Clustering

NLP
Text Processing , Stemming, Lemmatization, TF-IDF, Word2Vec, Bag of Words. Keyphrase extraction

Web stack
Flask, Postman

Maths & Stats
P-Value, ANNOVA test, Chi-Square test, Hypothesis Testing,

Prompt Engineering
LLM

Hugging Face

Education

M.B.A., *BITS Pilani*

B.E. Mechanical, *Mumbai University*

Awards

Best Employee Award, *POSCO*
Outstanding performance and contribution towards organization in implementing & effective models.

Languages

- English
- Hindi
- Marathi