

Aaditya Girish Komerwar

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EXPERIENCE

Data Scientist

Dec 2023 – Present

Tata Consultancy Services

Bengaluru, KA

- Developed an HR Assistant leveraging Azure OpenAI, improving operational efficiency by 30%.
- Deployed functionalities for referral management and course recommendations utilizing approximately 70% of data for model training.
- Engineered an automated business requirement documentation system, enhancing process efficiency by 25%.
- Integrated Retrieval Augmented Generation for the referral management functionality, representing approximately 33.33%
- Spearheaded the development of a Generative Pre-trained Transformer (GPT) model, including core components and training procedures using PyTorch, and successfully reduced the loss by 97.35%
- Constructed a BERT-based binary classification model for the IMDB dataset, achieving 92% accuracy.
- Designed a Transformer architecture from scratch using PyTorch, developing components such as Encoder, Decoder, and MultiHeadAttention, and achieved a 95% improvement in performance.

TECHNICAL SKILLS

Languages: Python, SQL, NoSQL

Libraries: Pandas, Numpy, Matplotlib, Seaborn, Scikit-Learn, Pyspark, Transformers

Frameworks: Flask, FastAPI, Keras, Tensorflow, Pytorch, HuggingFace, Langchain

Databases: PostgreSQL, MongoDB, Firebase

APIs: Azure OpenAI, Google Gemini

Developer Tools: Git, Docker, VS Code

PROJECTS

Construction Cost Estimation and Project Analytics | *Python, Machine Learning, Flask* Dec 2023 - Jan 2024

- * Orchestrated a predictive model by applying feature engineering and hyperparameter tuning across various regression models, achieving the highest predictive accuracy of 99.3% with XGBRegressor.
- * Random Forest, Gradient Boosting, CatBoosting Regressor, Decision Tree, AdaBoost Regressor also delivered accuracies ranging between 86.3% and 99.3%.
- * Harnessed comprehensive construction-related features to enhance predictive accuracy for estimating total construction costs, achieving an improvement of approximately 10.33%.

Employee Resignation Classification | *Python, Machine Learning, Flask*

Jan 2024 – Feb 2024

- * Implemented a classification model for employee resignation with an accuracy of 84.2%.
- * Obtained the highest accuracy with Random Forest Classifier at 84.2% and the lowest accuracy with Naive Bayes at 66.1%.
- * Other models tested include Decision Tree, Gradient Boosting Classifier, CatBoost Classifier, XGBoost Classifier, AdaBoost Classifier, K Nearest Neighbour, Logistic Regression, and Support Vector Machine, with accuracies ranging between 66.1% and 84.2%.
- * Leveraged detailed employee-related features to enhance classification accuracy, securing an increase of 12.27%.

EDUCATION

Savitribai Phule Pune University

Pune, MH

Bachelor of Engineering in Computer Science : CGPA - 8.54

Aug. 2019 – May 2023