Amit Gupta

DATA SCIENTIST | AI/ML SPECIALIST

With an academic background in Mechatronics engineering, I gained in-depth experience in NLP, Generative AI, Data Science, Computer vision through my studentarbeit, masterarbeit and professional work experience. This combined with my passion drives me to contribute to the cutting-edge solutions in the current highly dynamic landscape.

SUMMARY

Experienced AI and data science specialist with 5+ years in developing scalable solutions in retail, telecom, banking, insurance and R&D sectors. Have delivered projects following Agile methodology, ranging from recommendation systems, time-series forecasting, NLP text classification and Generative AI using Python, Pytorch, SQl, LangChain and Flask. Proactiveness and self-driven approach keep me updated in this highly volatile tech world.

CONTACT

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- Pune, India

EDUCATION

UNIVERSITY OF SIEGEN
M.Sc-Mechatronics
2023

KIIT UNIVERSITY, Bhubaneshwar
B.Tech-Mechanical Engg.
2017

STUDENTENARBEIT(Project):
Explainable Pneumonia detection using CNN.

MASTERARBEIT(Thesis): **Non-Rigid Puzzles without template.**
- Focus on finding the correspondences of the non-rigid deformations of the shapes without any template.
- Descriptors such as HKS, SHOT, Geodesic distance, Gaussian curvature, eigenvalues have been used.

EXPERIENCE

AI/ML SPECIALIST ACCENTURE SOLUTIONS PVT. LTD.
Nov 2024 - Present

- Led the redesign of the company's Chatbot enhancing the AI capabilities using RAG, Semantic Kernel and ChatGPT 4o. This resulted in 85% improvement in True Positives.
- Designed and developed an evaluation script leveraging Confusion Matrix for the answers generated by the Chatbot.
- Conducted extensive descriptive data analysis of the performance of the chatbot. Collaborated with development and leadership teams, documented and presented the results.
- Deployed the solution using Python, Flask, Git CI/CD on Azure Cloud.
- Worked on a PoC for a demand forecasting project using AWS and PySpark.

SENIOR NLP ENGINEER TURABIT SOLUTIONS PVT. LTD.
May 2024 – Oct 2024

- Developed a predictive model for interjection, leveraging Machine Learning models such as XGBoost, Bert with 94% accuracy. Also enhanced the chatbot performance by 30% improvement in precision.
- To achieve above milestone, trained and finetuned NLP models such as XGBoost with TFIDF, BERT, KeyBERT and Llama 2 7B. Used PEFT and LoRA methods for finetuning.
- Created API and integrated with seamless integration with other APIs using CI/CD using Git on Azure DevOps.

- The MSE was improved from 2.61 to 2.31.

SKILLS

- Python, Pandas, Numpy, SpaCy, PyTorch, PySpark, Sci-Kit learn, Matplotlib, Seaborn, Plotly
- Flask, Semantic Kernel, LangChain, LangGraph
- Azure, AWS ML Sagemaker
- SQL, PostgreSQL, MongoDB, Milvus (Vector DB)
- Git, CI/CD, Jupyter, PyCharm, VS code

CERTIFICATIONS
- Generative AI – DeepLearning.Ai
- Data Science
- AWS ML – Coursera
- MLOps – Udemy

REFERENCES – Letters upon request
- Benjamin Hill – CEO, ENSUN GmbH
- Hasan Abu-Rasheed – Research Assistant, University of Siegen.

PRODUCT ENGINEER V-LABS PVT. LTD.
Feb 2023- April 2024

- Developed and deployed the state-of-the-art solution to extract .eml file containing excel sheets with customer information for an insurance client, we achieved 92% accuracy compared the previous solution with 27%. Also implemented LLM RAG based solution for the same.
- The solution contained 4 different layers of text classifications leveraging Machine learning, text analytics using SpaCy, OCR.

RESEARCH ENGINEER-DATA SCIENTIST (WHILE DOING M.SC)
Ciena, India, Mar 2022- Oct 2022

- Developed and trained forecasting models for predicting telecom network outage. I also worked on data analysis for building a recommendation system on telecom data.
- Brainstormed with the team using techniques such as RCA, anomaly detection using statistical techniques such as 95% CI, PCA and clustering such as KMeans and DBSCAN.

ENSUN GmbH, Germany, Oct 2022 – Jan 2023
- Trained and deployed a multi-class text classification for B2B tech scouting startup.
- Built an ETL pipeline. Scrapped data from the internet, cleaned data using regex, SpaCy and loaded to on premise DB storage in MongoDB based on the classification done.

PROGRAMMER ANALYST COGNIZANT TECHNOLOGY SOLUTIONS PVT. LTD.
Nov 2017- Aug 2019

- Built a PoC for product recommendation system for a US based retail client.
- Mostly based on comparative data analysis of customer ordering history a recommendation model was built. We used time of ordering and product ordered.