

# HARSHIT MITTAL

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## EDUCATION

**Northeastern University** | Boston, USA

Master of Science in Information Systems

Expected April 2024

Relevant courses: Data Science Eng. Methods and Tools, Big Data Systems and IA, Advances in Data Sciences and Architecture

**Dr. A.P.J. Abdul Kalam Technical University** | Ghaziabad, India

Bachelor of Technology in Electronics and Communication Engineering

June 2018

Relevant courses: Data Structure, Computer System and Programming in C

## TECHNICAL SKILLS

<b>Languages/Framework-</b>	Python, SQL, Flask, FastAPI, Streamlit, LangChain, HTML, JAVA, JavaScript
<b>Databases-</b>	MS SQL Server, MySQL, IBM DB2, SQLite, PostgreSQL, Pinecone
<b>Machine Learning Libraries-</b>	Scikit-learn, PyCaret (AutoML), Matplotlib, Seaborn, Beautiful Soup, Pandas, NumPy, SciPy, Plotly
<b>Deep Learning Libraries-</b>	TensorFlow, Keras, PyTorch, NLTK, Hugging Face
<b>Tools-</b>	AWS, GCP, GitHub, Docker, Jira, IBM Watson Studio, Postman, Apache Airflow, Dbeaver
<b>Data Visualization-</b>	Tableau, Microsoft Power BI, MS Excel

## PROJECTS

### AI Chatbot for Healthcare

May 2023 - Jun 2023

- Developed a healthcare chatbot leveraging natural language processing (NLP) techniques, enabling users to interactively seek medical advice and insights similar to a virtual doctor's appointment
- Enhanced performance through lemmatization, tokenization and hyperparameter tuning, attaining 79% reduction in loss
- Engineered a deep learning LSTM RNN model for precise responses to queries/medical concerns, with 94% accuracy

### Smart ETL tool for research documents

Mar 2023 - Apr 2023

- Developed end-to-end data pipelines utilizing FastAPI for back-end API design and Streamlit for front-end interface to extract PDF files using a publisher's API and transfer to our AWS S3 bucket
- Built an intelligence service utilizing LangChain and OpenAI's LLM (Large Language Model) to deliver summaries of PDFs
- Implemented a document recommendation engine employing sentence-transformer models to convert unstructured text into embeddings, stored in Pinecone vector database, for semantic similarity-based recommendations
- Customized ChatGPT 3.5 LLM to facilitate contextually relevant information retrieval from large documents by leveraging text embeddings and prompt engineering, resulting in a 78% reduction in user search time
- Implemented an intelligent translation feature using 'Google Translator API' and custom code logic to automatically reconstruct translated content into PDF format
- Administered GitHub CI/CD pipeline to automatically test and deploy code changes, demonstrating MLOps expertise

### Instacart product recommendation engine (Capstone project)

Nov 2022 - Dec 2022

- Performed data mining, feature engineering, data visualization, exploratory data analysis on order transactional data
- Trained 4 predictive models like Random Forest classifier, XGBoost, on large dataset, achieving highest accuracy of 82%
- Deployed application on Google Cloud Platform VM instance using Docker, boosting customer retention by 56%

## WORK EXPERIENCE

**Swiftwin Technologies LLP.** | Pune, India

Senior Software Engineer

Feb 2021 - Aug 2022

- Designed and executed data-driven Digital Marketing campaigns across various channels, like Email and Push Notification, by utilizing JavaScript and Adobe Campaign Classic (marketing automation tool)
- Applied statistical analysis and A/B testing methodologies to assess the impact of different marketing strategies, driving a 24% increase in customer conversion rates
- Generated and presented insightful analytical reports and dashboards on customer interaction for ~25 million target base, eventually helping client in increasing customer engagement by 18%

**Wipro Limited** | Greater Noida, India

Project Engineer

Jul 2018 - Feb 2021

- Excelled in software quality assurance and testing, gaining proficiency in executing complex SQL queries to deepen understanding of database systems, by working in Agile environment
- Achieved distinction of logging highest number of bugs for 2 quarters in 2020, in a team of over 20 QA engineers
- Initiated and conducted 'Knowledge Transfer' sessions to mentor and empower 6 new team members

## CERTIFICATION

- IBM Data Science Professional Certificate** Jan 2023

## AWARDS

- Won the prestigious 'Generative AI Hackathon 2023' conducted at NEU, showcasing exceptional AI innovation skills.