

ALSFAK KAMAL

Indian Institute of Technology Madras | 8917899674
kamalasker007@gmail.com | Github | LinkedIn | Portfolio



EDUCATION

Programme	Institute/Board	CGPA/Percentage	Year
M.Tech in Applied Mechanics	Indian Institute of Technology Madras	8.88	2023-Present
B.Tech in Mechanical Engg.	Dr. RML Awadh University, Ayodhya (U.P.)	81.64%	2017-2021
Senior Secondary	U.P. Board	75.6%	2017
Secondary	CBSE	8.0	2014

SCHOLASTIC ACHIEVEMENT

- Secured All-India Rank of **848** in **GATE 2023**.

PROFESSIONAL EXPERIENCE

- My Analytics School (Data Science Intern)** Jun 2024 - Aug 2024
 - Led the **8 members team** and extracted the 100+ company's data by using **BeautifulSoup** as a Web Scrapping tool.
 - Built a **RAG-based chatbot** using **Langchain**, **Ollama** frameworks, **Chroma** for vectorDB and **LLMs** for embeddings.
 - Enhanced its performance by initiating **Cross Encoder** as a **Re-Ranker** and achieved the accuracy of **92%**.
 - Used **Streamlit** for designing of UI to give multiple PDFs as input and successfully deployed on **AWS EC2 instance**.
- PaySMART Payment Technologies Pvt. Ltd., Chennai (Data Analyst Intern)** May 2024 - Jul 2024
 - Extricated the data for the **Inward remittance analysis** of India and prepared **automated** dashboard using **PowerBI**.
 - Enhanced marketing efforts through data-driven strategies for market expansion, led curriculum innovation initiatives and applied iterative improvements based on feedback to drive company growth and profitability.
 - Performed **competitive analysis** for the organization as well as **SWOT** insight for product development.

PROJECTS

- Predicting Meso-Scale Local Mechanical Properties using Fourier Neural Operator** Aug 2024 - Ongoing
*M.Tech Project * (Phase 1), Guide: Prof. Ilaksh Adlakha*
 - Deployed a **Deep Learning Model** to predict the local mechanical response of **2D composite materials** precisely.
 - FNO** was implemented to train and evaluate the model, utilizing a dataset derived from **Abaqus** simulations.
- Time Series Analysis for Air Pollution Forecasting (Personal Project)** Oct 2024
 - Analyzed a dataset with 44,000 rows and 13 features, performing **univariate** and **multivariate** analyses.
 - Applied feature engineering techniques alongside **MinMaxScaler** normalization for effective data preprocessing.
 - Developed predictive models using **SARIMA** and **LSTM** with **Adam** optimizer, achieved **96.04%** accuracy by **MSE**.
 - Utilized **Dropout** technique and hyperparameter tuning to reduce overfitting and enhance model performance.
- Named Entity Recognition with spaCy v3 (Personal Project)** Jul 2024
 - Preprocessed and **tokenized** a custom NER dataset, converting text data into numerical indices and architected a model to classify text into categories such as **PERSON**, **LOCATION**, and **ORG**. using **Bi-directional LSTM**.
 - Visualized recognized entities in the text using **SpaCy's** tool for interpretation and acheived **96.7%** accuracy.
- Sentiment Analysis Model for IMDb Movie Reviews (Personal Project)** May 2024
 - Implemented sentiment analysis on a balanced IMDB dataset with 50,000 reviews (positive and negative).
 - Enhanced model performance through **vectorization**, **stemming**, **lemmatization**, and **n-gram** usage.
 - Surpassed **90%** accuracy using word counts and **TF-IDF**, with **logistic regression** and **LinearSVC** models.
- Data Analysis on Employee Data using SQL-PowerBI Integration (Personal Project)** Dec 2023
 - Merged multiple tables of Employee datasets and Performed Data Analysis using **MySQL Workbench**.
 - Executed **Joins**, **Views**, **Subqueries** and **Advanced queries** for department-wise analysis of KPIs such as salary, employee counts, gender ratio, and span of control for the company.
 - Transferred the data and organized different charts into an **Interactive** and **Automated** dashboard using **PowerBI**.

TECHNICAL SKILLS

- Tools/Libraries:** Machine Learning, Deep Learning, NLP, Time Series Analysis, GenAI, Transformer, Pandas, NumPy, NLTK, Seaborn, Matplotlib, Scikit-Learn, TensorFlow, LangChain.
- Programming Language and Visualization Tools:** Python, MySQL and MS-Excel, PowerBI, Tableau.

POSITIONS OF RESPONSIBILITY

- WebOps Seceratry:** Leading **10 members** in WebOps team to handle the AMSA, IIT Madras website. (Aug'23-Present)
- Class Representative:** Serving as primary contact between peers and faculty to assess the problems. (Aug'23-Present)
- Teaching Assistant:** Guiding **250+** students in AM2540 Lab and **200+** students in GN5003 Course. (Jul'24-Nov'24)

AREA OF INTEREST

- Data Analysis, Business Analysis, Problem Solving, Data Science, Machine Learning, Generative AI, Statistics.

EXTRA-CURRICULAR ACTIVITIES

- Techno Exhibition:** Achieved **4th** Position among 80+ competitors in **5th National Level Techno Exhibition** organized by Dr.A.I.T, Bangalore in 2019.
- Volunteer in Team Everest NGO:** Prepared an English Curriculum for empowering underprivileged children.