SABARISH RAJA RAMESH RAJA

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EDUCATION

- **Illinois Institute of Technology, Chicago, IL** MAY 2026
  Master of Science, Computer Science, GPA 3.33
  Relevant Coursework: Introduction to Machine Learning, Advanced Database Organization
- **SRM Institute of Science and Technology, Tamil Nadu, India** JUNE 2024
  Bachelor of Technology, Computer Science, GPA 3.9

SKILLS

- Programming Languages: Python, SQL, C, C++
- Framework and Tools: Scikit-learn, TensorFlow, Keras, NLTK, PyTorch
- Data Visualization tool: Power BI, Matplotlib, Jupyter Notebook
- Data Preparation and Analysis: Exploratory Data Analysis (EDA), Data Cleansing, Outlier Detection and Handling, Feature Engineering
- Machine Learning Techniques : Supervised Learning (Regression, Classification), Unsupervised Learning (Clustering), Reinforcement Learning (Familiar), Deep Learning (ANN), Natural Language Processing (NLP), Generative AI/LLMs (Familiar)
- Non-Technical: Teamwork, Leadership, Problem Solving

RESEARCH EXPERIENCE

A Scalable Ensemble Learning with Performance Evaluation for Credit card fraud Detection JAN 2025

- Built an ensemble model combining Isolation Forest, XGBoost, and SVM, achieving Precision-Recall score of 97.0% and ROC-AUC of 96.3%, when working with a highly imbalanced dataset.
- Used techniques like ADASYN and NearMiss to handle class imbalance, which made the model more reliable and better at generalizing to unseen data.
- Published findings in the AIP Conference Proceedings following presentation at the International Conference on Robotics, Automation, and Intelligent Computing (ICRAIC 2K24).

Analyzing the Computational Efficiency of LLM Models for NLP tweet classification AUG 2024

- Trained and evaluated LLM models (BERT, RoBERTa, LSTM, DistilBERT) to classify tweets as informative or non-informative during emergency scenarios, achieving 92.0% classification accuracy with 89% precision on the Twitter dataset.
- Published findings in the IFIP Advances in Information and Communication Technology series following presentation at the International Conference on Computational Intelligence in Data Science (ICCIDS 2024)

PROJECT EXPERIENCE

NLP Classification of Disaster Tweets AUG 2023 – JAN 2024

- Pre-processed disaster tweets from the Kaggle dataset by performing stopword removal and word embedding.
- Developed and trained Large Language models to classify the disaster tweets and achieved 92% accuracy.
- Collaborated with a team-mate and presented the research findings at the ICCIDS - 2024 Conference.

Anime Recommendation System FEB 2023 – FEB 2024

- Designed a recommendation engine to find similarities between users' genre preferences and anime ratings.
- Performed pre-processing to remove unwanted data and implemented cosine similarity algorithm.

Sales Insight and Analytics Project JAN 2023 – FEB 2023

- Constructed SQL queries in MySQL software to extract sales data from the relational database and implemented data cleansing, normalization, and aggregation techniques.
- Utilized DAX in Power BI to create new calculated columns and measures for key sales performance indicators.

WORK EXPERIENCE

Web Development Intern FEB 2024 – MAY 2024

Bytecompass, Tamil Nadu, India

- Developed an Interactive User Management Platform (IUMP) using HTML, CSS, and JavaScript and created responsive UI and gained hands-on experience in React, optimizing the platform for performance.
- Designed and built a dynamic user dashboard in React.js, leveraging state management techniques and a modular component structure to enable seamless, real-time updates of user profile information.