FIROZ SHAIK

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EDUCATION

University of Illinois at Chicago   **Aug'23 – May'25**

Master of Science in Computer Science
- Coursework: Data Mining & Text Mining, Natural Language Processing, Data Science, Query Processing on Database Systems, and Statistical NLP.

R.V.R & J.C College of Engineering, Andhra Pradesh, India   **Jul'16 – Sep'20**

Bachelor of Technology, Computer Science and Engineering
- Coursework: Machine Learning, Artificial Intelligence, Data Structures, Algorithms, Operating System, Software Engineering, Object-Oriented Programming, Advanced Java, Computer Networks, IOT, Database Management Systems, and Cloud Computing.

SKILLS

Programming Languages: Python, Java, SQL

Big Data Technologies: Apache Spark (including Spark SQL), Hadoop (HDFS, YARN), Apache Databricks

Data Warehousing & Cloud Data Services: Redshift, BigQuery, Snowflake, AWS Redshift Spectrum, Azure Synapse Analytics

Data Pipeline Orchestration: Apache Kafka, Apache Flink

Cloud Platforms & Services: Azure, AWS, Docker, Kubernetes

Database Management: SQL (Azure SQL, MySQL, PostgreSQL)

Data Visualization & BI: Power BI, Looker, Tableau

DevOps & Version Control: CI/CD, Azure DevOps, Git, Apache Airflow, DVC

ML Frameworks & Tools: TensorFlow, PyTorch, scikit-learn

ACADEMIC PROJECTS

Optimizing Query Processing Algorithms for Enhanced Database Performance (Query Processing on Db Systems)   **Mar'24 – May'24**
- Implemented hash-based, line, and sequential join algorithms to enhance query processing efficiency by 25%, ensuring rapid and accurate data joins.
- Improved database performance by 20% through the application of systematic join trees, reducing computational overhead and streamlining data processing.

Text Summarization with Attention-based Deep Recurrent Neural Networks (Statistical NLP)   **Feb'24 – May'24**
- Conducted an in-depth comparison of LSTM and GRU networks, optimizing text summarization for over 230,000 WikiHow articles using attention mechanisms, resulting in a 15% improvement in summarization accuracy.
- Enhanced model adaptability for long text sequences, achieving a 10% improvement in performance validated through quantitative ROUGE score analysis.

Chatbot Development (Natural Language Processing)   **Aug'23 – Dec'23**
- Developed a sophisticated chatbot utilizing machine learning models for sentiment and stylistic analysis, integrating Gaussian Naive Bayes, Logistic Regression, SVM, and MLP Classifiers, resulting in an 85% accuracy rate in user sentiment detection.
- Enhanced user interaction with a multi-state dialogue system and robust feature extraction using TF-IDF and Word2Vec, improving response accuracy by 20% and user satisfaction by 15%.

WORK EXPERIENCE

Infosys Limited, Bengaluru, India   **Jul' 22 – Jul'23**

Systems Engineer
- Enhanced Databricks notebook performance by 20% through optimizing Spark configurations (e.g., adjusting executor memory and parallelism), significantly improving large-scale data analytics.
- Developed SQL scripts to boost BI reporting efficiency by 30% by streamlining complex queries and optimizing indexes; implemented an Apache Airflow proof of concept, increasing data orchestration reliability by 15% through automated workflow.

Tata Consultancy Services, Bengaluru, India   **Feb'21 – Jun'22**

Azure Data Engineer
- Designed and implemented scalable, metadata-driven data ingestion pipelines using Azure Data Factory, automating pipeline scheduling which eliminated manual tasks and improved overall productivity by 25%.
- Implemented CI/CD pipelines with Azure DevOps, reducing deployment cycles by 33% and saving 15% on operational costs through auto-pausing resources in non-production environments.

CERTIFICATIONS & ACHIEVEMENTS

- **AWS Certified: Cloud Practitioner, Microsoft Certified: Azure Fundamentals, and Microsoft Certified: Azure Data Fundamentals.**
- Secured the "**Award for Excellence**" from TCS for outstanding achievements in fine-tuning Azure Databricks, boosting data processing speeds by 40% and enhancing efficiency across various initiatives.
- Obtained certifications in "**Software Security Assurance**" and "**Agile Way of Working Foundation**," underscoring proficiency in secure coding standards and flexible, efficient project management approaches.
- Achieved a distinguished performance rating of "**4.7/5**" at TCS, placing in the top 5% of employees, for consistently surpassing job expectations and showcasing exceptional skill in data engineering and analytics within the Azure framework.