SAI VENKATA ADITHYA CHALLA

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EDUCATION

University of Southern California, Viterbi School of Engineering　　　　**Aug 2024 - May 2026**
Master's, Computer Science (Data Science)　(GPA: 3.86/4.0)
- **Coursework:** Applied NLP, Database Systems, Information Retrieval, Machine Learning for Data Science, Web Technologies

GITAM University, School of Technology　　　　**Jun 2019 - Apr 2023**
Bachelor of Technology, Computer Science　(GPA: 9.15/10)
- **Coursework:** Neural Networks and Deep Learning, Probability and Statistics, Data Warehouse and Mining

TECHNICAL SKILLS

- **Programming Languages:** C, Java, Python, R, KQL, Microsoft Azure, PySpark, Databricks, MySQL
- **Data Analysis & Visualization:** Numpy, Pandas, Matplotlib, Seaborn, Power BI, Excel, Power Automate, Tableau
- **ML/AI Frameworks:** Scikit-learn, TensorFlow, Keras, PyTorch, NLTK, Beautiful Soup, Flask, OpenCV
- **Web Technologies:** HTML, CSS, JavaScript, React, Flask, Power Pages, Node.js, .NET
- **Data Engineering:** Azure Data Factory, Azure Synapse Analytics, Azure Databricks, Microsoft Fabric

EXPERIENCE

MAQ Software | *Software Data Operations Engineer*　　　　**Aug 2023 - Jun 2024**
- Analyzed over 500 customer-facing issues and built data-driven KPIs and monitoring dashboards to evaluate resolution time and workflow efficiency, enabling faster tracking and improved operational visibility.
- Built and maintained scalable Azure data pipelines using Data Factory, Synapse Analytics, and Databricks to streamline data ingestion, migration, and transformation across structured and unstructured sources.
- Optimized ETL performance by implementing staging architectures, KQL-based transformations, and automated refresh cycles, improving data reliability and reducing processing latency by nearly 10%.
- Developed Power BI dashboards integrated with Power Automate to visualize key resolution metrics, cutting customer issue resolution time from 1–2 weeks to 2–3 days through automated alerts and scheduled data refreshes.

Future Ready Talent | *Intern*　　　　**Dec 2022 - Jan 2023**
- Implemented a **facial recognition pipeline** using **Azure Cognitive Services** combined with **Python (OpenCV)** to process images, detect contours, and extract facial features for accurate classification.
- Evaluated model robustness by analyzing performance across variations in lighting, pose, and occlusion, ensuring reliable identity verification in real-world conditions.

PROJECTS

Credit Card Fraud Detection
- **Analyzed and preprocessed** a large-scale credit card fraud dataset by removing redundant columns and addressing **class imbalance** using **SMOTE**, ensuring fair model performance.
- **Trained and compared multiple ML models**, achieving **95% accuracy with Random Forest**, outperforming baseline classifiers.
- **Developed and deployed a Flask-based web application** that integrated the trained model to **predict fraudulent vs. non-fraudulent transactions in real time**, providing users with actionable risk alerts.

Waste Classification using Transfer Learning
- Built a **9-class image classification system** on **5,000+ images**, with **EfficientNetB0 achieving 97.6% AUC and 91.3% validation accuracy**, outperforming ResNet50, ResNet101, and VGG16.
- Designed a **robust training pipeline** with augmentation, early stopping, learning rate reduction, and class weighting to address imbalance and improve generalization.

Text Prediction using DL
- **Preprocessed and tokenized** large text corpora to generate input sequences for predictive modeling.
- **Implemented an LSTM-based text prediction model** using **TensorFlow and Keras**, optimized with Adam and categorical cross-entropy loss.
- **Trained and evaluated the model**, achieving **90.3% prediction accuracy** in generating context-aware next-word suggestions.

Rubik's Cube Solver
- **Implemented the Kociemba algorithm** to compute the **optimal sequence of moves** required to solve the cube.
- Displayed the solution steps as an output sequence, enabling users to follow and complete the cube efficiently.

CERTIFICATIONS

- Microsoft Azure Fundamentals Certification　　　　- Microsoft Fabric Analytics Certification