

BINDU SRIVALLI NAGINENI

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PROFESSIONAL EXPERIENCE

University of Texas at Arlington

Administrative Assistant

Arlington, TX, USA

Aug 2024 - Present

- Improved data accuracy by 99% and reduced processing time by 30% by utilizing SQL, Power BI, Python, and Excel to automate data handling and integrate with ServiceNow for processing and analyzing records for 20,000+ UTA graduation attendees and 8,000+ employee transitions.
- Enhanced reporting efficiency by 25% and reduced manual data handling by 40% by developing Power BI dashboards with DAX and SQL, integrating ServiceNow and Excel data, and streamlining workflows with Azure DevOps.
- Streamlined data processing workflows by utilizing Azure DevOps and Python scripting to automate routine data tasks and improve system integration.

Quantum Learnings

Machine learning engineer

India

Jan 2023 - Jul 2023

- Reduced manual processing effort by 70% by developing a scalable ETL pipeline using Apache Kafka, Hadoop, Python, SQL, and AWS Redshift for real-time processing of student feedback and records.
- Improved student satisfaction by 10% by building real-time data pipelines feeding Tableau dashboards, utilizing Python, NLP, and Pandas for sentiment analysis of student feedback.
- Enabled efficient data manipulation and analysis in machine learning and data science projects by utilizing Databricks and Python.

PROJECTS & OUTSIDE EXPERIENCE

Movie Recommendation System - [Link to project](#)

Arlington, TX, USA

2024 - 2025

- Achieved 83% accuracy in movie recommendations by building a sentiment-driven movie recommendation system using a hybrid NLP model (LSTM-CNN, RoBERTa) and Power BI for visualization.
- Delivered personalized movie recommendations using Rotten Tomatoes data by applying optimized training with A100 GPUs.
- Enhanced semantic search capabilities in the movie recommendation system by implementing a hybrid NLP model.
- Utilized advanced data visualization by combining Power BI with machine learning models to visualize movie recommendation insights.

E-Commerce Platform - [Link to project](#)

Arlington, TX, USA

Full stack

2024 - 2025

- Developed a full-stack e-commerce web app using React.js, Node.js, Express, and MySQL with user authentication and dynamic cart management.
- Implemented product category-based filtering, search, and sorting along with a secure checkout and order history system.
- Built an admin dashboard for managing products with full CRUD operations and a panel to view all user orders.
- Designed responsive UI using Bootstrap with banner sliders, hover effects, and profile editing features for enhanced UX.

ArtifactNet - [Link to project](#)

Dallas, TX, USA

Deep Learning Engineer

- Developed a dual-head deep learning model using EfficientNet-B2 to simultaneously detect deepfake images and classify them into categories: human faces, animals, and vehicles.
- Achieved 96% real/fake accuracy and 100% class-wise accuracy on validation sets using Focal Loss to handle data imbalance and advanced augmentation techniques to improve generalization.
- Trained on the ArtiFact_240K dataset, optimizing for precision and recall across unseen synthetic samples to ensure model robustness.
- Applied test-time strategies and saliency map research to plan future integration of model explainability and video detection support.
- Tackled challenges in deepfake generalization and multi-class accuracy by tuning data pipelines, applying augmentation policies, and selecting appropriate architectures.

MeetWise - [Link to project](#)

Dallas, TX, USA

LLM Integration & Workflow Automation Engineer

Apr 2025 - Apr 2025

- Developed an AI-powered networking tool enabling event attendees to connect meaningfully based on shared interests, roles, and goals using semantic profile matching.
- Built the frontend using React.js with Supabase authentication, and implemented Supabase Edge Functions for seamless backend logic.
- Designed and executed automated workflows using n8n, integrating Google Gemini API to generate high-dimensional text embeddings.
- Engineered a text chunking pipeline using Recursive Character Text Splitter to ensure context-preserving segmentation for vectorization.
- Integrated with Pinecone for vector database storage, enabling real-time semantic similarity searches between user profiles.
- Associated rich metadata with each user chunk to preserve traceability and improve context-aware matching in vector queries.
- Overcame challenges in API integration and semantic chunking by building robust error handling and metadata management pipelines.

SKILLS

Languages :Python, R, SQL, HTML/CSS, JavaScript

Tools :Power BI, Tableau, Excel, Anaconda,Docker,GitHub, OpenCV

Frameworks :Actions (CI/CD), Apache Spark,Scikit-learn, Flask

Cloud:AWS (S3, Redshift, RDS), Kubernetes (basic)

Machine Learning :Data Cleaning, Regression, Clustering, Sentiment Analysis, Forecasting, Scikit-learn

Databases :Microsoft SQL Server, MySQL, MongoDB, NoSQL, Snowflake

Certifications :Google Data Analytics Professional Certificate, Complete Data Analyst Bootcamp (AWS), Data Analyst Associate (DA-100) (On-going)

LEADERSHIP / EXTRACURRICULAR

- Won the " Best use of Gemini API" award by MLH at UTA Datathon 2025.
- Represented SRKR ISTE as a Campus Ambassador, leading 200+ students and increasing participation by 40% through technical workshops and networking initiatives.
- Secured multiple First Prizes and Certificates of Merit in Paper Presentations at SRKR Women Empowerment Cell, SRKR IETE, and ISTE SRKREC for excellence in technical and research-driven presentations.

EDUCATION

University of Texas - Arlington

Aug 2023 - May 2025

Master's, Computer Science

SRKR

Aug 2019 - May 2023

Bachelor's, Computer Science