**Jahnavi Ashok**

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**EDUCATION**

**Master of Science, Data Science** Expected May 2026

University of Texas at Arlington, Arlington, TX 4.0 GPA

**Bachelor of Engineering, Information Science** May 2021

JSS Science and Technology University, Karnataka, India 8.8 CGPA

**TECHNICAL SKILLS**

**Languages/Libraries:** Python, C++, C, SQL, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, TensorFlow, Keras, Hugging Face Transformers, OpenAI GPT

**Tools & Platforms:** Power BI, Streamlit, Visual Studio, Jupyter, Git, Databricks  
**Core CS Knowledge:** Data Structures, Algorithms, OOPs

**PROFESSIONAL EXPERIENCE**

# Western Digital, Bangalore, India: Sr. Software Engineer, Software Engineer, Intern January 2021 – July 2024

# Contributed to prototyping and validating NVMe protocol-based storage devices, streamlining firmware validation workflows in an Agile/Scrum environment.

# Implemented and enhanced NVMe command support per evolving product requirements, increasing validation efficiency by 15%.

# Replaced direct device queries with a database-backed system, improving framework performance by 20% and reducing system load.

# Extended tool functionality to support multi-controller environments, increasing scalability and expanding testing coverage by 50%.

# Optimized data retrieval using lazy tree-loading logic, enhancing tool performance by 40%.

# Led the design, documentation, requirements gathering, feasibility analysis, and effort estimation processes, ensuring efficient and predictable development cycles.

# Utilized continuous integration tools and performed risk analysis, system debugging, and validation testing to ensure software quality.

# Gained hands-on experience with CI/CD, Linux environments, Git, and debugging tools, making direct contributions to high-performance and maintainable infrastructure.

# Mentored 5 interns, accelerating onboarding and enhancing team productivity and delivery timelines.

**RELEVANT PROJECTS**

# Soil Saturated Hydraulic Conductivity (Ksat) Prediction - *UTA Datathon Winner* April 2025

* Won 1st place at UTA Datathon by building an end-to-end machine learning pipeline to predict soil Ksat values with 97% test accuracy.
* Engineered features from multi-source soil datasets; performed data cleaning, transformation, and unit standardization.
* Trained and tuned a Random Forest model using cross-validation; ran 50+ randomized trials to validate consistency via RMSLE and R² metrics.
* Deployed a Streamlit web app to enable real-time Ksat prediction from user-input soil parameters.

**Hybrid LSTM + GNN Model for Oil Well Resistivity Prediction** August 2025

* Developed a multiplex Graph Neural Network (GNN) combined with LSTM to predict ILD (resistivity) curves using well log data.
* Constructed neighbor graphs using Spearman correlation and integrated depth-wise features from 5 different correlation types.
* Applied Optuna hyperparameter tuning with early stopping, optimizing dropout, learning rate, and hidden dimensions.
* Visualized predictions using Matplotlib, enabling well-to-well performance analysis.

**AWARDS & HONORS**

* **Spot Award**, for software tools contribution *(Western Digital, July 2023)*
* **1st Place – UTA Datathon (2025)** – Best machine learning solution