

PROFESSIONAL SUMMARY

I am a graduate master's student in Artificial Intelligence with over 2 years of hands-on experience in building and deploying machine learning solutions. Experienced in developing real-time inference systems, optimizing ML pipelines, and working on models for classification, ranking, and personalization. Proficient in Python and SQL, having practical exposure to cloud platforms like AWS and GCP. I am skilled in deploying models using tools like Gradio, Jenkins and Heroku. Eager to contribute to teams and grow as an ML engineer.

EDUCATION

University of North Texas , Denton, Texas	08/2023-05/2025
Master of Science in Artificial Intelligence	GPA:3.5/4.0
DVR & Dr. HS MIC College of Technology , India	06/2018-08/2022
Bachelor of Technology in Electrical and Electronics Engineering	GPA:3.5/4.0

SKILLS

- **Technical Skills:**
 - Languages: C, Python, Java SQL, HTML, Bash, Data Structures and Algorithms.
 - Libraries: TensorFlow, scikit-learn, Pandas, NumPy, Matplotlib, PyTorch, Seaborn, NLTK.
 - Machine Learning: Classification, Regression, Hyperparameter Tuning, model calibration, experiment tracking.
 - NLP & GENAI: Prompt engineering, sentiment analysis, real-time scoring, Gradio demos, LLM.
 - Cloud Platforms: AWS, GCP, Snowflake.
 - Tools & MLOps: Apache Spark, GitHub, Jenkins, Gradio, Heroku, Jupyter, VS Code, CI/CD, Airflow(basic).
 - Operating Systems: Windows, Linux.
 - Data Engineering: Data preprocessing, Model deployment, Feature engineering, Hugging Face.
 - Microsoft Office suite: Microsoft Word, Excel, PowerPoint, Outlook, Report Writing.
 - Soft Skills: Technical reporting, Verbal & Written communication.
 - Led and supervised a team of engineers across different functions.

EXPERIENCE

Internship (APSSDC, Andhra Pradesh, India)	01/2022-05/2022
Embedded Systems Intern	

- Developed and evaluated embedded C firmware for 8051-based microcontrollers using the Keil uVision (C51), implementing sensor data acquisition and control logic for Arduino-style prototypes. Circuit schematics were designed, simulated, and debugged in Proteus to guarantee precise timing and dependable sensor-driven system functioning.
- Worked on a Smart Car Parking project with HC-SR04 ultrasonic sensors on an Arduino, optimizing calibration to achieve 95% detection accuracy and built obstacle detection algorithms, performed iterative firmware debugging and optimized sensor calibrations for precise vehicle detection.
- Constructed detailed technical documentation, such as test results, code annotations, and system architectural diagrams, which improved team knowledge transfer and simplified further development.

Web Developer (Creators Touch, Andhra Pradesh, India)	08/2022-06/2023
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Junior Web Developer

- Designed and managed a MySQL database schema, written optimized SQL queries for data retrieval, reporting and basic CRUD operations. Created automated data ingestion pipelines with python scripts to import and clean CSV files from clients which led to reduced manual data prep time by 75%.
- Built interactive dashboards using Plotly Dash, helping clients to explore sales and user metrics through simple interfaces. Provided level 1 support for data pipeline issues with 99% uptime, diagnosing failures via logs and applying hotfixes within SLAs.
- Deployed and maintained applications on Heroku using Git and supported post deployment assistance, log checking using Heroku dashboard and python to solve any issues quickly.
- Integrated NLTK based sentiment classifier into the client dashboard to auto tag customer feedback which provides immediate insights to the marketing teams.

Research Assistant (MIC College of Technology, India)	08/2019 –05/2021
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- Led a 6-member team to build ML-based fault detection systems using Random Forest and SVM, achieving 90% accuracy and also improving the system uptime by 20%.
- Built data preprocessing pipelines to prepare sensor logs for supervised learning. This helped to reduce the model's training time by 30%
- Coordinated budget planning and inventory tracking for components and responsible for project management combining AI and electronics research. Finally, submitted technical reports and presentations to faculty for

future improvements.

ACADEMIC PROJECTS

Music Genre Classification using CNN & Mel-spectrograms (Capstone Project):

- Utilized the GTZAN dataset and developed preprocessing pipelines in python to manage missing files and balance classes. Converted the audio files to Mel-spectrograms and extracted frequency, time-domain features. Then, we applied log-Mel transformation, gaussian smoothing and edge detection to enrich model inputs.
- Designed and trained a CNN model on raw and feature engineering spectrograms in TensorFlow which achieved 96.5% test accuracy and 57% validation accuracy surpassing standard CNN and Random Forest baseline models.
- Evaluated the model with metrics like accuracy, precision, recall and deployed the CNN model via a Gradio web interface for real-time predictions. Prepared and presented detailed performance reports and visualizations of the model.

Automated Essay Grading System:

- Engineered a feature extraction pipeline over 1805 essays generating a comprehensive input dataset by calculating rubric signals like causal clauses, transitional phrases and core linguistic metrics like word count, sentence count, passive voice count etc.
- Combined extracted features with human assigned Domain 1 scores and split the dataset into 80/20 for training and testing to ensure robust model validation.
- Conducted OLS regression analyses ($p < 0.05$) to identify the most significant linguistic predictors, informing feature selection and model interpretability. Built a Gradio demo for real-time scoring and delivered an Excel report comparing model vs. human ratings.

Sentiment Analysis

- Led a 4-member team to create and deploy a real time sentiment classification model which categorizes the text into positive, negative, and neutral classes. Built end to end processing and feature engineering workflows in scikit-learn, experimented with SVM, Naïve Bayes, and MultinomialNB algorithms.
- Conducted hyperparameter tuning (GridSearchCV) and recursive feature elimination which improved the model's accuracy from 71% to 86%.
- The results and representations were provided via interactive dashboards, informing the product feedback strategies.

COURSE WORK

Machine Learning, Deep Learning, Big data, Data Mining, Data Modelling, Software Development for AI, Natural Language Processing, Feature Engineering, Embedded Systems, Empirical Analysis, Computer Vision, Statistical Learning, Cloud Computing Fundamentals, AWS Cloud Architecture, Computer Networks, Data Structures & Algorithms, Database Systems (SQL), Python, Statistical Learning.

AREA OF INTERESTS

- Cloud Computing & Infrastructure
- Natural Language Processing and Transformer Models
- Machine & Deep Learning
- Generative AI
- Computer Vision & Image Processing
- Large Language Models

CERTIFICATIONS/TRAININGS

- Internet Of Things (IOT) Workshop by IIT Hyderabad
- Build Box Game Development Workshop by APSSDC
- Coursera: Deep Learning Specialization by Andrew Ng
- AWS Certified Solutions Architect – Associate