BHAVYA SREE PYLA

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LinkedIn | Available: May - July 2027

EDUCATION

Northeastern University, Sept. 2025 - Present
Khoury College of Computer Sciences Expected Graduation: 2027
Candidate for a Master of Science in Artificial Intelligence
Related courses: Algorithms, Programming Design Paradigm

Mahindra University, Hyderabad, India
Bachelor of Technology in Artificial Intelligence, 2021-2025
Related courses: Neural Networks and Machine Learning, Data Analytics using Deep Learning, Recommender Systems, Reinforcement Learning & Autonomous Systems, AI in Industry

TECHNICAL KNOWLEDGE

Languages:	Python, Java, MATLAB, JavaScript,
Databases:	MySQL, Oracle SQL
Skills:	NLP, Machine Learning, Deep Learning, LLMs, RAG, Neural Networks,
Libraries:	PyTorch , Keras, TensorFlow, Scikit-learn, OpenCV, YOLO, Pytesseract matplotlib, scipy,
.	Streamlit, NLTK,
Certifications:	Data Analytics using Deep Learning (NUS, Singapore), Data Analytics using Big Data (NUS, Singapore and AWS amazon), MATLAB(Mathworks)

WORK EXPERIENCE

Number Plate Detection with Vehicle Classification (Project under AP Government) Jan 2025
AI Intern

- Performed data aggregation, preprocessing, and annotation using Label Studio, ensuring high-quality datasets for training and validation.
- Classified vehicles using a hybrid model built with YOLOv5 and ResNet-50, increasing classification reliability under varied lighting and camera angles.
- Integrated Tesseract OCR for extracting alphanumeric characters from plates and optimized OCR performance using image enhancement and noise-reduction techniques.

PROJECTS

Image Captioning and Speech Generation July 2023
National University of Singapore (NUS), Singapore

- Built an end-to-end vision-to-speech system using a CNN and LSTM encoder-decoder architecture for generating natural language image captions.
- Trained the model on a curated dataset with image preprocessing, augmentation, and embedding extraction to improve caption fluency.
- Integrated a speech synthesis module using text-to-speech (TTS) to convert generated captions into audio output, enabling an accessible, multimodal interface.

Data-driven Electric Vehicles Charging Station Occupation Detection July 2024
Mahindra University

- Designed predictive models that combine CNN feature extraction with LSTM sequence modeling, enabling both temporal and spatial pattern learning from sensor feeds.
- Processed large volumes of temporal usage data to identify demand trends and improve model reliability across different time windows.

Hybrid Similarity Model Mitigating Cold-Start Problem in Collaborative Filtering Aug 2025
Mahindra University

- Developed a hybrid similarity algorithm combining content-based and collaborative filtering approaches to address sparse data limitations in recommender systems.
- Incorporated Wasserstein distance and optimized similarity weights to improve cold-start recommendations for new users/items.