



INTERNATIONAL INSTITUTE OF
INFORMATION TECHNOLOGY

HYDERABAD



ID NO 2501843

OUTREACH DIVISION

CERTIFICATE OF MERIT

awarded to

Harshita Nalajala

for **Excellent** performance in

**PG Certification Program in
Artificial Intelligence and Machine Learning**

**Organized by Outreach Division
in association with TalentSprint**

September 2025 - August 2026

Prof. Ramesh Loganathan
Head, Outreach

Prof. C. V. Jawahar
Program Director



INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY

H Y D E R A B A D

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PROGRAM COVERAGE

Programming, Math Foundations and Classical Algorithms

- ◆ Key Python Libraries (NumPy, SciPy, Pandas, Matplotlib)
- ◆ Overview of AI and ML concepts
- ◆ Principles of ML and Deeper Look at ML
- ◆ Data Processing and Visualization
- ◆ Features Selection and Extraction
- ◆ Intuitive and Simple Algorithms
- ◆ Classification and Regression problems
- ◆ Dimensionality Reduction
- ◆ Representing Text and Language
- ◆ Sampling Methods (Bootstrap and Bagging)

Problem Formulation and Neural Networks

- ◆ Formulating real world problems for AI/ML
- ◆ Representation of real-world data
- ◆ Manifold learning and Unsupervised Learning
- ◆ Overfitting and Generalization
- ◆ Performance Metrics
- ◆ Non-Linear solutions & Multi-Layer Perceptron
- ◆ Gradient Descent and Backpropagation
- ◆ PCA with EigenFaces
- ◆ Support vector machines and Kernels
- ◆ Natural Language Processing (NLP)
- ◆ Features for Perception (Image and Speech)
- ◆ Ensemble Methods, Random Forest, XG-Boost
- ◆ Human in the Loop systems

Deep Learning

- ◆ Introduction to Deep Learning
- ◆ Pytorch, TensorFlow & Keras
- ◆ Convolutional Neural Networks
- ◆ Autoencoders
- ◆ Recurrent Neural Networks
- ◆ Time Series Application
- ◆ Appreciating CNNs
- ◆ RNN, LSTM and GRU
- ◆ Recommendation Systems

Advanced Topics

- ◆ Beyond AlexNet and Transfer Learning
- ◆ Fast API
- ◆ Deployment and Practical Issues
- ◆ Model Compression
- ◆ Siamese Networks and GANs
- ◆ Computer Vision
- ◆ ML in Speech and NLP
- ◆ Industry Lectures and talks
- ◆ Attention and Transformers: BERT, GPT
- ◆ Hugging Face Platform & Transformer Library
- ◆ Fine Tuning of BERT & GPT, PEFT
- ◆ RAG, LangChain

Capstone Project: Real World RAG System

CERTIFICATION FRAMEWORK

Grade	Percentile
Outstanding	Top 10% performers
Excellent	Next 30% performers
Very Good	Next 40% performers
Good	Others

* Certificate of Merit is awarded to participants who fulfill Attendance Criteria of 75%.

* Certificate of Participation is awarded to others.