

ID NO 2418684

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY

HYDERABAD

OUTREACH DIVISION

CERTIFICATE OF MERIT

awarded to

Animesh Gaur

for **Very Good** performance in

PG Certification Program in Artificial Intelligence and Machine Learning

Organized by Outreach Division in association with TalentSprint

November 2024 - August 2025

ANIMESH GAUR,2418684,PG CERTIFICATION PROGRAM IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING,VERY GOOD, ANIMESH GAUR,2418684,PG CERTIFIC

Prof. Ramesh Loganathan
Head, Outreach

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY

Prof. C. V. Jawahar
Program Director

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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.