



13 Courses

Machine Learning with Python

Introduction to Deep Learning & Neural Networks with Keras

Deep Learning with Keras and Tensorflow

Introduction to Neural Networks and PyTorch

Deep Learning with PyTorch

AI Capstone Project with Deep Learning

Generative AI and LLMs: Architecture and Data Preparation

Gen AI Foundational Models for NLP & Language Understanding

Generative AI Language Modeling with Transformers

Generative AI Engineering and Fine-Tuning Transformers

Generative AI Advance Fine-Tuning for LLMs

Fundamentals of AI Agents Using RAG and LangChain

Project: Generative AI Applications with RAG and LangChain



Jan 16, 2025

**Hassan Abdus Salam**

has successfully completed the online, non-credit Professional Certificate

## IBM AI Engineering

In this certificate program the certificate holder learned to train, develop, fine-tune and deploy deep learning models including large language models (LLMs). The learner mastered supervised and unsupervised learning, using Python. The certificate holder learned to build deep learning models and neural networks using Keras, PyTorch, and TensorFlow. They developed transfer learning applications in NLP using major language model frameworks like LangChain, Hugging Face, and PyTorch. They understand generative pre-trained transformers (GPT), LLaMA, and BERT, for building natural language processing (NLP)-based applications. The certificate holder implemented a project using LangChain and RAG.

Rav Ahuja  
AI & Data Science  
Program Director  
IBM Skills Network

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Verify this certificate at:

<https://coursera.org/verify/professional/al-cert/8OI9T7C2P93C>