

Aman Yadav

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SKILLS

LANGUAGES: Python, Java.

FRAMEWORKS: TensorFlow, PyTorch, Gradio, Scikit-Learn, LangChain, Transformers, Matplotlib, NumPy.

TOOLS/PLATFORMS: MySQL, ChromaDB, GitHub, CUDA, Docker, SHAP, Vertex AI, Hugging Face.

SOFT SKILLS: Problem-solving, Analytical Thinking, Teamwork, Leadership.

SPECIALIZATION TRAINING

IBM AI Engineering Specialization

August 2025 – December 2025

- Designed and implemented end-to-end **machine learning and deep learning pipelines**.
- Trained, fine-tuned and deployed deep learning models such as **RNN, LSTM, CNN, ViT and Transformer-based architectures**.
- Applied **PyTorch, TensorFlow, Scikit-Learn, LangChain, Hugging Face Transformers** in hands-on labs.
- Built a **RAG-based** Question Answering Bot by leveraging **IBM Watsonx Granite LLMs** and **Gradio** for the user interface.

PROJECTS

RAG Based Question Answer Bot

November 2025 – December 2025

- Developed a **Retrieval-Augmented Generation**-based Question Answering system using **LangChain**.
- Integrated **IBM Watsonx Granite Large Language Models** and the **RetrievalQA chain** to generate context-aware responses.
- Implemented **ChromaDB vector database** with **IBM Slate embedding model** to create and retrieve **semantic document embeddings**.
- Built an interactive **user interface** using **Gradio** for document upload and query execution.

Tech – RAG, LangChain, ChromaDB, RetrievalQA, Granite LLM, Slate Embeddings, Gradio.

Tweets Sentiment Analysis

July 2025 – August 2025

- Developed a deep neural network for sentiment analysis using a **TensorFlow Sequential model**.
- Processed tweets to generate tokens and vocabulary indices for **embedding generation**.
- Integrated **CUDA** for **GPU-based accelerated model training** inside a **Docker** container.
- Model scored an **F1 score of 0.835** with **cross-entropy loss of 0.4605**, demonstrating robustness.

Tech – TensorFlow, Docker, CUDA, NLTK, Scikit-Learn, Pandas, NumPy, Matplotlib.

Plant Counting Project

March 2025 – April 2025

- Built a **CNN-based model** using **MobileNetV2 with ImageNet parameters for transfer learning** to predict the number of plants in agricultural land images.
- Designed an efficient deep learning pipeline and implemented **callbacks** to enhance model training.
- Achieved an **R2 score of 0.71** and **RMSE of 8.26** on the test data.

Tech – TensorFlow, NumPy, Pandas, Matplotlib, Convolutional Neural Networks, MobileNetV2.

CERTIFICATES

- | | |
|--|----------------|
| Fundamentals of AI Agents Using RAG And LangChain – IBM | December 2025 |
| Generative AI Language Modeling with Transformers – IBM | September 2025 |
| Gen AI Foundational Model for NLP and Language Understanding - IBM | August 2025 |
| Generative AI and LLMs: Architecture and Data Preparation – IBM | August 2025 |

ACHIEVEMENTS

- Leet Code**
Solved 150+ problems, achieving the 100-days problem solving badge.
- Kaggle Competition**
Participated in Petal-To-Metal, Spaceship Titanic and Home Prices Prediction competitions.
- Hacker Rank**
Achieved Gold Level in Python and Silver Level in C++.

EDUCATION

Lovely Professional University

Jalandhar, Punjab

- Bachelor of Technology in Computer Science and Engineering; CGPA: 7.14

Pursuing

Army Public School

Jalandhar Cantt, Punjab

- Intermediate

2021 – 2022

Army Public School

Jalandhar Cantt, Punjab

- Matriculation

2019– 2020