

AiCouncil: Career-Focused Training Programs

Welcome to AiCouncil – Your Gateway to an AI-Driven Career

AiCouncil offers career-focused training in cutting-edge technologies including:

Artificial Intelligence (AI)

Artificial Intelligence is the simulation of human intelligence in machines. It enables machines to perform tasks like reasoning, learning, and decision-making.

Example: Building a virtual assistant like Alexa that understands voice commands and responds intelligently.

Data Science

Data Science involves collecting, processing, analyzing, and interpreting large volumes of data to make informed decisions.

Example: Using Python and visualization tools to identify trends in customer purchase data for a retail brand.

Machine Learning (ML)

ML allows machines to learn from data and improve their performance without being explicitly programmed.

Example: Predicting housing prices based on location, size, and amenities using regression techniques.

Deep Learning

A subset of ML, Deep Learning uses multi-layered neural networks to solve complex problems such as image and speech recognition.

Example: Using CNNs to classify X-ray images or RNNs for language translation.

Computer Vision

Computer Vision enables machines to interpret and understand visual data like photos or videos.

Example: Face recognition in smartphones or detecting tumors in medical scans.

MLOps (Machine Learning Operations)

MLOps focuses on the deployment, automation, and monitoring of ML models in production environments.

Example: Building a pipeline to retrain and redeploy a fraud detection model using Docker, Git, and MLflow.

Generative AI

Generative AI creates new content such as images, text, or code using large language models and diffusion models.

Example: Automatically generating a blog article from a headline using models like Gemini or GPT.

Artificial Intelligence (AI)

Simulates human intelligence in machines to perform tasks like reasoning and problem-solving.

Topics Covered:

- **Foundations of AI & intelligent agents**
- **Rule-based systems**
- **Search algorithms (A*, DFS, BFS)**

- **Real-world AI applications**

Example: Building a rule-based chatbot for customer support.

Data Science

Analyzing and interpreting large datasets to extract insights and support decision-making.

Topics Covered:

- **Data wrangling with Pandas & NumPy**
- **Exploratory Data Analysis (EDA)**
- **Statistical inference & hypothesis testing**
- **Time series forecasting**

Example: Predicting sales trends based on historical retail data.

Machine Learning (ML)

Enables machines to learn from data and improve automatically.

Topics Covered:

- **Supervised Learning (Regression, Classification)**
- **Unsupervised Learning (Clustering, PCA)**
- **Model evaluation & tuning**

- **Bias-variance tradeoff**

Example: Detecting credit card fraud using classification algorithms.

Deep Learning

Uses neural networks to analyze complex data such as images, speech, and text.

Topics Covered:

- **Neural Networks: ANN, CNN, RNN**
- **TensorFlow & PyTorch**
- **Backpropagation & optimization**
- **Transfer Learning**

Example: Image recognition using Convolutional Neural Networks (CNNs).

Computer Vision

Empowers systems to understand images and videos.

Topics Covered:

- **Image pre-processing**
- **Object detection (YOLO, SSD)**
- **Face recognition**

- OCR for document reading

Example: Building a smart attendance system using facial recognition.

MLOps

Operationalizing ML models to run reliably in production.

Topics Covered:

- Model deployment using FastAPI
- Version control with Git
- Experiment tracking with MLflow
- Docker & CI/CD pipelines

Example: Deploying a predictive model with automatic retraining using Docker.

Generative AI

Uses models to generate text, code, images, or even music.

Topics Covered:

- Prompt Engineering
- Gemini & GPT APIs
- LangChain, Flowise, Vector DBs

- **PEFT, LoRA-based fine-tuning**

Example: Building a PDF-based document chatbot with natural responses.

Why Choose AiCouncil?

- Hands-on learning with real-world projects
 - Industry-ready curriculum
 - Capstone project & internship support
 - Job assistance & recognized certifications
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Topics Covered

- Python for AI/ML
 - Statistics & Probability
 - Data Wrangling & EDA
 - Supervised & Unsupervised Learning
 - Deep Learning with TensorFlow & PyTorch
 - NLP & Transformers
 - Computer Vision
 - MLOps (with FastAPI, Git, MLflow, Docker)
 - Generative AI & Prompt Engineering
 - Tools: Streamlit, LangChain, Flowise
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Industry Partnerships

- NVIDIA Inception Program Member
 - Microsoft Solution Partner
 - AWS Partner Network Member
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Certifications Offered

1. Training Completion – *AiCouncil (Partnered with NVIDIA Inception Program & Microsoft Solution Partner)*
 2. Project Certification – AiCouncil
 3. Internship Certificate – *(if qualified)*
 4. Job Recommendation Letter
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Website

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