

Beginner AI Course

Introduction

This course introduces the fundamentals of Artificial Intelligence, covering basic concepts, types of AI, and essential mathematics and programming skills. Learners will explore machine learning, neural networks, and generative AI through hands-on exercises, simple projects, and practical Python examples, building a foundation to create and evaluate AI models confidently.

CURRICULUM:

Sr. No.	Contents
1	Introduction to AI & Python Basics • What is AI, what it can / cannot do • Types: narrow AI, general AI (basic intro) • Overview: Machine Learning vs Deep Learning vs AI apps • Python refresher: data types, basic syntax, working with Python REPL / notebooks

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2	Data Handling & Preprocessing • Libraries: NumPy & pandas • Loading datasets; CSV / JSON • Cleaning data: missing values, basic cleaning • Exploratory data analysis: summary statistics, visualizations (matplotlib / seaborn)
3	Core Math & Statistics for AI • Basic statistics: mean, median, mode, variance, standard deviation • Probability fundamentals • Linear algebra basics: vectors, matrices, dot product • Why this math matters in ML
4	Supervised Learning • What is supervised learning • Regression: linear regression, cost/loss, fitting model • Classification: logistic regression, evaluation metrics (accuracy, precision, recall, F1)
5	Unsupervised Learning • Clustering (K-means etc.) • Dimensionality reduction (PCA basic idea) • Use cases
6	Model Evaluation & Overfitting • Train/test split, cross-validation • Bias vs variance • Overfitting, underfitting, regularization basics

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7	Neural Networks & Deep Learning Intro • What is a neural network; perceptron; activation functions • Basic feedforward network • Loss functions, optimizers • Training via backpropagation (with libraries e.g. Keras / PyTorch)
8	Practical ML Project • Putting together what's learned: choose a simple dataset (e.g. house prices / Iris / MNIST) • Build, train, evaluate a model • Report: dataset used, preprocessing, model choice, evaluation
9	Introduction to Generative AI • What is generative AI; how is it different • Examples of generative AI: text generation, image generation, audio, etc. • Basic architectures: what a model needs to generate rather than just classify
10	Language Models & Prompt Engineering • Large Language Models (LLMs) basics: what they are, how they are trained / fine-tuned • Tokenization, embeddings • Prompt engineering: making prompts, few-shot / zero-shot, controlling output

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11	Generative Models: Hands-on Tools • Using APIs / tools: e.g. OpenAI API, Hugging Face models • Simple projects: text completion, summarization, maybe image generation (via DALL-E or similar) • Discussion: limitations, biases, risks (hallucinations etc.)
12	Final Project & Wrap Up • Final project: pick one of generative AI applications (e.g. chatbot, summarizer, content generator, image + text combined) • Deployment / demonstration of project

Learning Outcomes:

By the end of this course, participants will be able to:

- Create and execute effective digital marketing campaigns independently.
- Use SEO and keyword research to increase website visibility.
- Manage Google Ads and Meta Ads with data-driven targeting.
- Analyze performance through analytics and reporting dashboards.
- Develop social media and content strategies that drive engagement.
- Apply email marketing and conversion optimization techniques effectively.
- Demonstrate the ability to work as a digital marketing expert or freelancer.
- Contribute to organizational growth through strategic online branding.

Course Benefits:

- Learn directly from industry professionals with real-world experience.
- Gain hands-on exposure through live projects and campaign simulations.
- Improve career and freelancing opportunities in Pakistan and abroad.
- Master advanced advertising techniques across Google, Facebook, Instagram, and LinkedIn.
- Build confidence in content creation, marketing strategy, and analytics reporting.
- Understand how to use AI tools and automation to improve performance.
- Earn a recognized certification that enhances professional credibility.

Skill-Wise Earnings:

Skill Level	Avg Monthly Salary
Junior	75k-100k
Mid-Level	100k - 170k
Advanced	250k- 450k
Freelancer	Earn in millions

Affiliation & Collaboarations

