

KOENIG SOLUTIONS · COURSE OUTLINE

Hugging Face: Transformers, Datasets & Pipelines

Learn to use Hugging Face models, datasets and pipelines to build, fine-tune and interpret NLP applications.

1 Day

8 HOURS A DAY

8

MODULES

17

TOPICS

5

HANDS-ON ACTIVITIES

COURSE OVERVIEW

Start your Hugging Face - Generative AI journey today

WHO THIS COURSE IS FOR

NLP Engineers

Data Scientists

Machine Learning Engineers

AI Developers

Software Developers

PREREQUISITES

- Basic understanding of Python programming
- Familiarity with natural language processing concepts is recommended
- No prior experience with Hugging Face is required

LEARNING OBJECTIVES

What You'll Learn :

- Understanding of Hugging Face Platform
- Explore different models, Datasets, documents and ecosystem
- Play with Pipelines

TRAINING APPROACH

Hands-on Approach

8 Modules, 17 Topics

01

Introduction to Hugging Face

TOPICS

- Overview of Hugging Face and its significance in NLP
- Exploration of Hugging Face's model repository
- Introduction to the Hugging Face Transformers library

02

Hands-on

Hugging Face Models

TOPICS

- Diving deeper into pre-trained models
- Understanding model architectures: BERT, GPT, T5, and more

03

Hands-on

Hugging Face Datasets

TOPICS

- Overview of the Hugging Face Datasets library
- Accessing and utilising various datasets for NLP tasks

04

Hands-on

Hugging Face Documents

TOPICS

Introduction to Hugging Face Documents · Leveraging document-level models

05

Hands-on

Hugging Face Ecosystem: Pipelines and Tokenizers

TOPICS

- Utilising Hugging Face Pipelines for easy NLP tasks
- Customising and chaining pipeline components

06

Hands-on

Model Interpretability and Explainability

TOPICS

- Importance of model interpretability in NLP
- Interpreting model predictions using Hugging Face tools

07

Advanced Topics in Hugging Face

TOPICS

- **Multi-modal models:** Combining text and images
- Cross-lingual and zero-shot learning with Hugging Face

08

Project Showcase and Future Directions

TOPICS

- Participants present their Hugging Face projects
- Opportunities and challenges in NLP using Hugging Face

NOTES

- Some experience with programming is suggested.
- The hands-on labs will provide practical experience with setting up
- This course can be customised based on the audience's prior knowledge and specific areas of interest.
- Course Duration - 1 days (8 Hours)
- Number of Modules - 8
- By the end of this course, participants will have a thorough understanding of how to harness the power of Hugging Face's models, datasets, documents, and ecosystem to tackle a wide range of NLP tasks and challenges.

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
02	Hugging Face Models	Fine-tuning a model for sentiment analysis
03	Hugging Face Datasets	Loading, preprocessing, and using custom datasets
04	Hugging Face Documents	Building a document summarization application

#	MODULE	ACTIVITY
05	Hugging Face Ecosystem: Pipelines and Tokenizers	Creating an NLP pipeline for text generation
06	Model Interpretability and Explainability	Using LIME and SHAP for model explanations

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

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