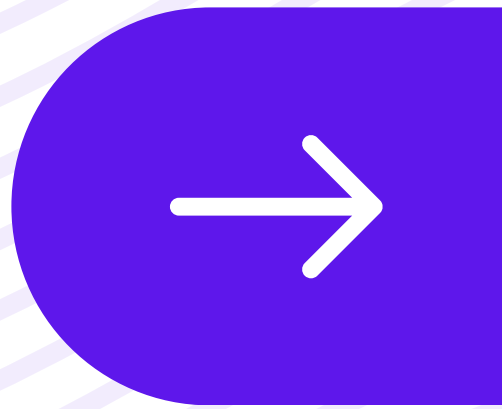
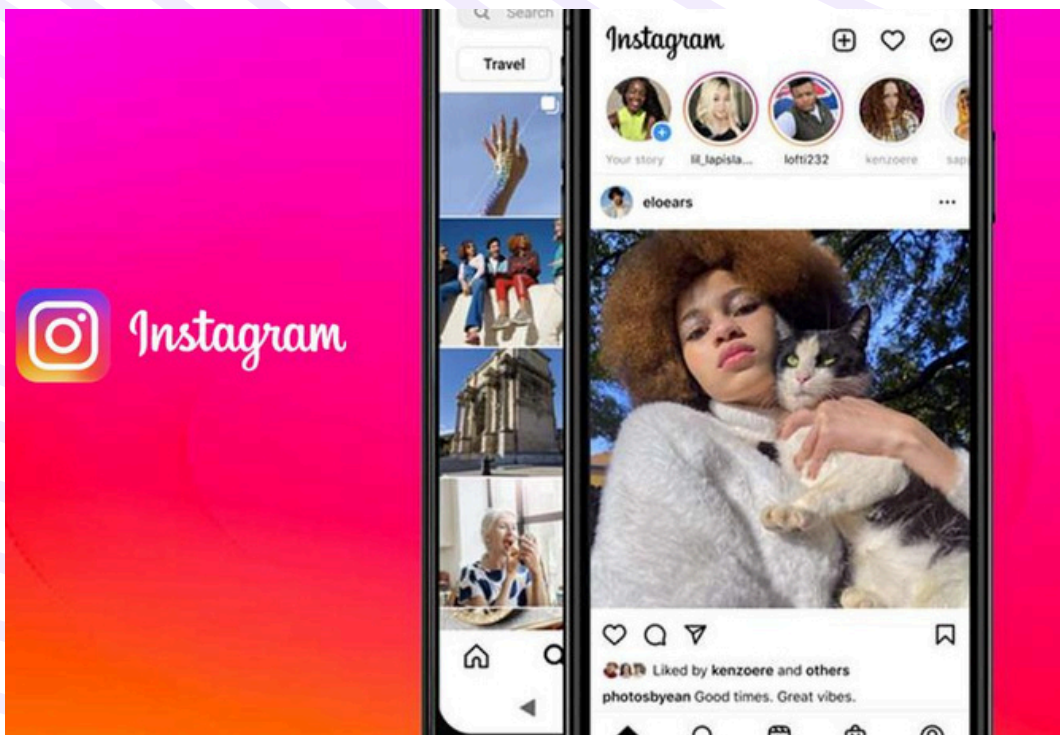


EVER WONDERED HOW INSTAGRAM KNOWS YOUR MOOD??



**INTRODUCTION TO
NLP & GENERATIVE AI !!!**



NLP??



“
Q NLP: WHEN AI LEARNS TO SPEAK HUMAN!

📖 TURNING BOOKS INTO BINARY
🤖 TEACHING ROBOTS SMALL TALK

NLP IS THE SECRET SAUCE IN YOUR TECH TACO! 🌮 ✨

”



Epoch

Gen AI??



“ “
Q GEN AI: CRAFTING CREATIVITY WITH CODE!

🎨 CREATING ART WITH ALGORITHMS 🎵
COMPOSING SYMPHONIES FROM SCRATCH

GEN AI IS THE MAGIC BEHIND THE SCENES OF
TECH CREATIVITY! 🎨 ✨



INTRODUCTION

NATURE LANGUAGE PROCESSING(NLP):

- **NATURAL LANGUAGE PROCESSING (NLP) IS A SUBFIELD OF ARTIFICIAL INTELLIGENCE THAT FOCUSES ON THE INTERACTION BETWEEN COMPUTERS AND HUMANS THROUGH NATURAL LANGUAGE.**
- **THE GOAL OF NLP IS TO ENABLE MACHINES TO UNDERSTAND, INTERPRET, AND GENERATE HUMAN LANGUAGE IN A WAY THAT IS BOTH MEANINGFUL AND USEFUL.**

GENERATIVE AI (GEN AI):

- **GENERATIVE AI IS A SUBSET OF ARTIFICIAL INTELLIGENCE FOCUSED ON CREATING NEW CONTENT, FROM TEXT AND IMAGES TO MUSIC AND MORE.**
- **IT LEVERAGES MODELS THAT LEARN PATTERNS FROM EXISTING DATA TO GENERATE ORIGINAL AND CREATIVE OUTPUTS. THE GOAL OF GEN AI IS TO ENABLE MACHINES TO PRODUCE NOVEL AND VALUABLE CONTENT THAT CAN MIMIC HUMAN CREATIVITY.**



MOTIVATION

- **INDUSTRY DEMAND:** NLP & GEN AI IS A RAPIDLY GROWING FIELD WITH APPLICATIONS IN VARIOUS INDUSTRIES, INCLUDING HEALTHCARE, FINANCE, CUSTOMER SERVICE, AND ENTERTAINMENT. SKILLS IN THESE AREAS ARE HIGHLY SOUGHT AFTER.
- **INNOVATIVE APPLICATIONS:** LEARNING NLP & GEN AI ALLOWS YOU TO WORK ON CUTTING-EDGE PROJECTS LIKE CHATBOTS, VIRTUAL ASSISTANTS, LANGUAGE TRANSLATION, AND CONTENT GENERATION.
- **INTERDISCIPLINARY NATURE:** IT COMBINES ASPECTS OF COMPUTER SCIENCE, LINGUISTICS, AND MACHINE LEARNING, OFFERING A RICH, INTERDISCIPLINARY LEARNING EXPERIENCE.



you
can do
anything



✓ believe
✓ achieve
✓ succeed

ROAD MAP

1 FOUNDATIONS OF MACHINE LEARNING

- UNDERSTAND BASIC CONCEPTS OF MACHINE LEARNING (ML).
- LEARN PROGRAMMING LANGUAGES COMMONLY USED IN ML, SUCH AS PYTHON
- STUDY FUNDAMENTAL ML ALGORITHMS AND TECHNIQUES.

2 INTRODUCTION TO NLP

- LEARN ABOUT TEXT PREPROCESSING TECHNIQUES LIKE TOKENIZATION, STEMMING, AND LEMMATIZATION.
- STUDY PART-OF-SPEECH TAGGING, NAMED ENTITY RECOGNITION, AND SYNTACTIC PARSING.

3 CORE NLP TECHNIQUES:

- EXPLORE VECTOR REPRESENTATIONS OF TEXT, INCLUDING WORD EMBEDDINGS (WORD2VEC, GLOVE).
- UNDERSTAND LANGUAGE MODELING AND SEQUENCE MODELING WITH RNNs AND LSTMS.



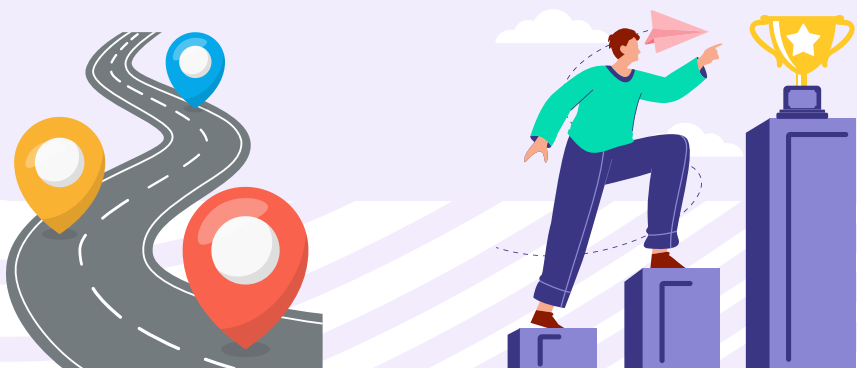
ROAD MAP

4 ADVANCED NLP:

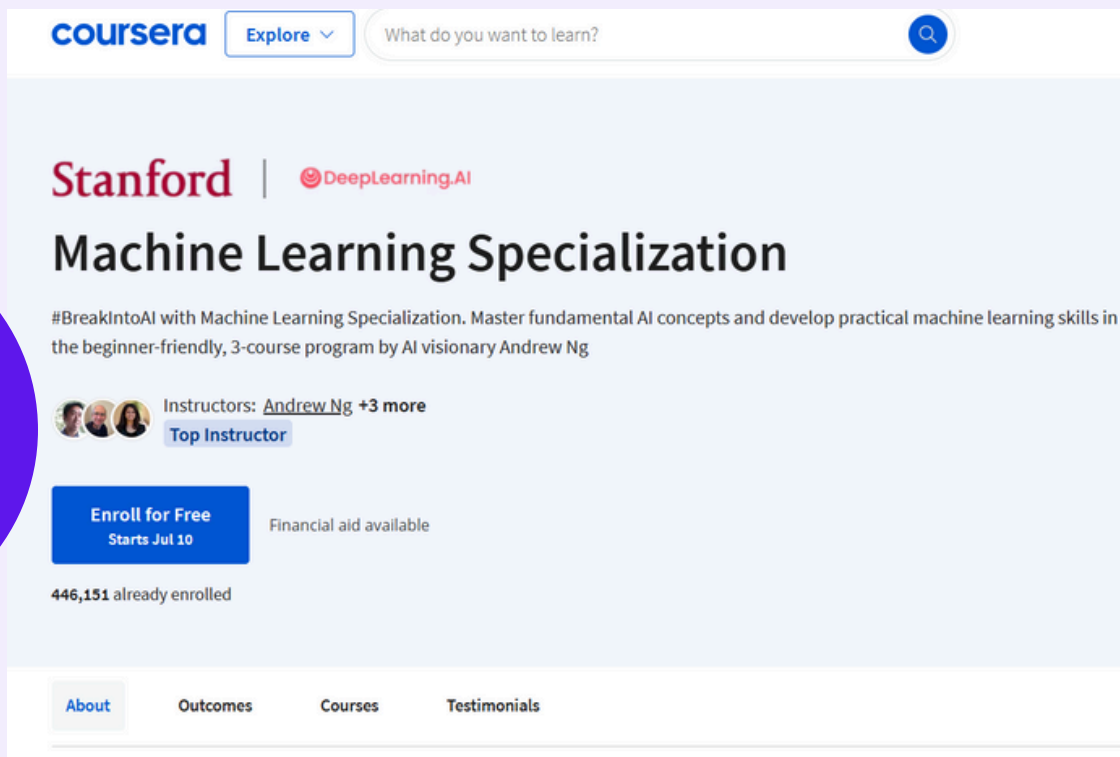
- DIVE INTO TRANSFORMER MODELS LIKE BERT, GPT, AND THEIR VARIANTS.
- STUDY TECHNIQUES FOR MACHINE TRANSLATION, SUMMARIZATION, AND SENTIMENT ANALYSIS.

5 GENERATIVE AI

- LEARN ABOUT GENERATIVE MODELS, SUCH AS GANS (GENERATIVE ADVERSARIAL NETWORKS) AND VAES (VARIATIONAL AUTOENCODERS).
- STUDY TEXT GENERATION MODELS AND APPLICATIONS IN CREATIVE WRITING AND DIALOGUE SYSTEMS.
- STAY UPDATED WITH THE LATEST RESEARCH BY READING PAPERS AND FOLLOWING AI CONFERENCES.
- JOIN ONLINE COMMUNITIES AND FORUMS TO COLLABORATE AND LEARN FROM PEERS.



RESOURCES



coursera Explore

Stanford | DeepLearning.AI

Machine Learning Specialization

#BreakIntoAI with Machine Learning Specialization. Master fundamental AI concepts and develop practical machine learning skills in the beginner-friendly, 3-course program by AI visionary Andrew Ng

Instructors: [Andrew Ng](#) +3 more
Top Instructor

Enroll for Free
Starts Jul 10

Financial aid available

446,151 already enrolled

About Outcomes Courses Testimonials



100 DAYS OF MACHINE LEARNING
Introduction to ML

Day # 1

100 Days of Machine Learning

CampusX
132 videos 3,853,327 views Last updated on May 4,...

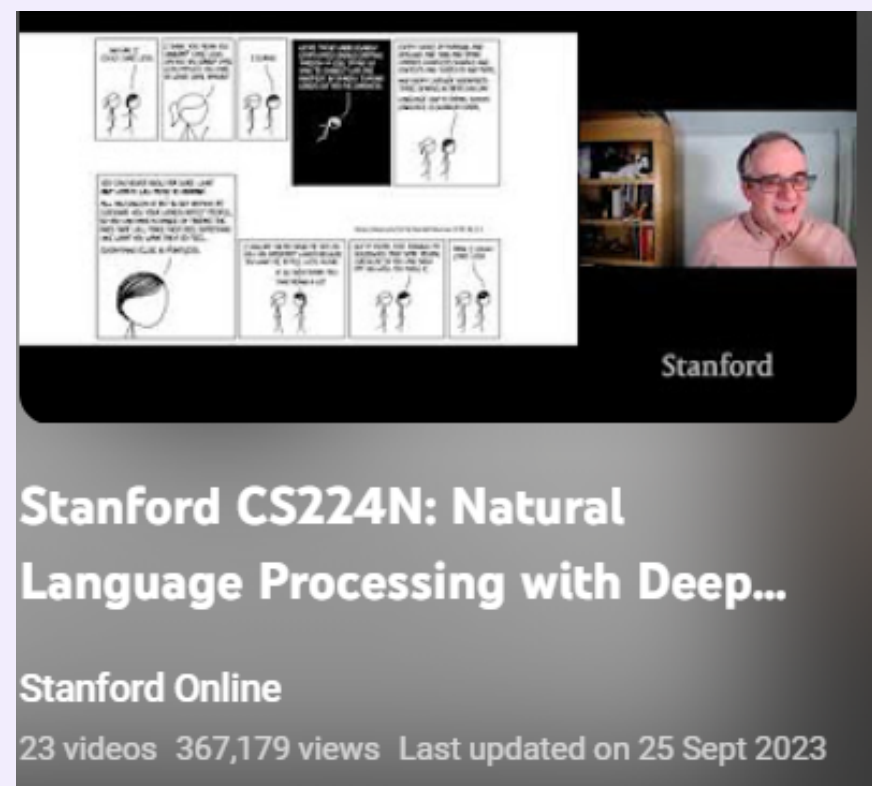


NLP TUTORIAL

NLP Tutorial Python

codebasics

27 videos 962,270 views Last updated on 17 Jul 2023



Stanford CS224N: Natural Language Processing with Deep Learning

Stanford Online

23 videos 367,179 views Last updated on 25 Sept 2023

SUGGESTIONS

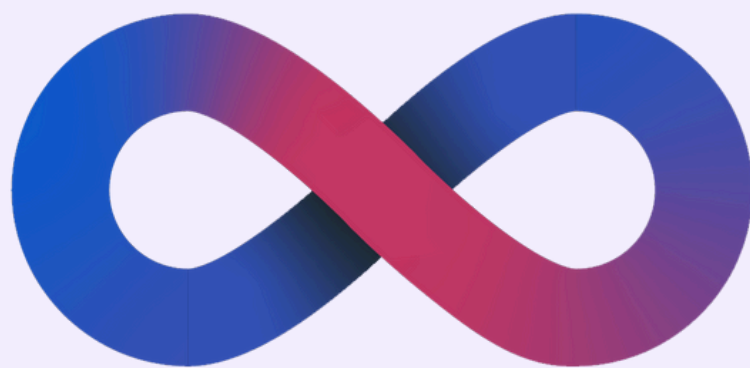
- **START WITH ONLINE COURSES:** PLATFORMS LIKE COURSERA, EDX, AND UDACITY OFFER COMPREHENSIVE COURSES ON NLP AND MACHINE LEARNING
- **READ BOOKS AND PAPERS:** SOME RECOMMENDED BOOKS INCLUDE "SPEECH AND LANGUAGE PROCESSING" BY JURAFSKY AND MARTIN, AND "DEEP LEARNING" BY GOODFELLOW, BENGIO, AND COURVILLE.
- **HANDS-ON PRACTICE:** APPLY WHAT YOU LEARN BY WORKING ON PROJECTS AND USING DATASETS FROM SOURCES LIKE KAGGLE.
- **LEVERAGE LIBRARIES AND FRAMEWORKS:** FAMILIARIZE YOURSELF WITH POPULAR LIBRARIES SUCH AS NLTK, SPACY, AND HUGGING FACE TRANSFORMERS.
- **NETWORK AND COLLABORATE:** JOIN AI AND NLP COMMUNITIES, ATTEND MEETUPS AND CONFERENCES, AND COLLABORATE ON PROJECTS TO ENHANCE YOUR LEARNING EXPERIENCE.
- **EXPERIMENT AND INNOVATE:** DON'T BE AFRAID TO EXPERIMENT WITH NEW IDEAS AND APPROACHES. INNOVATION OFTEN COMES FROM TRYING OUT UNCONVENTIONAL METHODS.



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Want to know more?

Follow us!!!



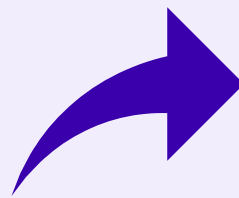
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Save