EVER WONDERED HOW SPOTIFY RECOMMENDS SONGS??

INTRODUCTION TO DEEP LEARNING !!

COLLABORATIVE FILTERING

Listened to by both users

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CONTENT-BASED FILTERING

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Similar songs

Recommended to user

Deep learning?

Epoch
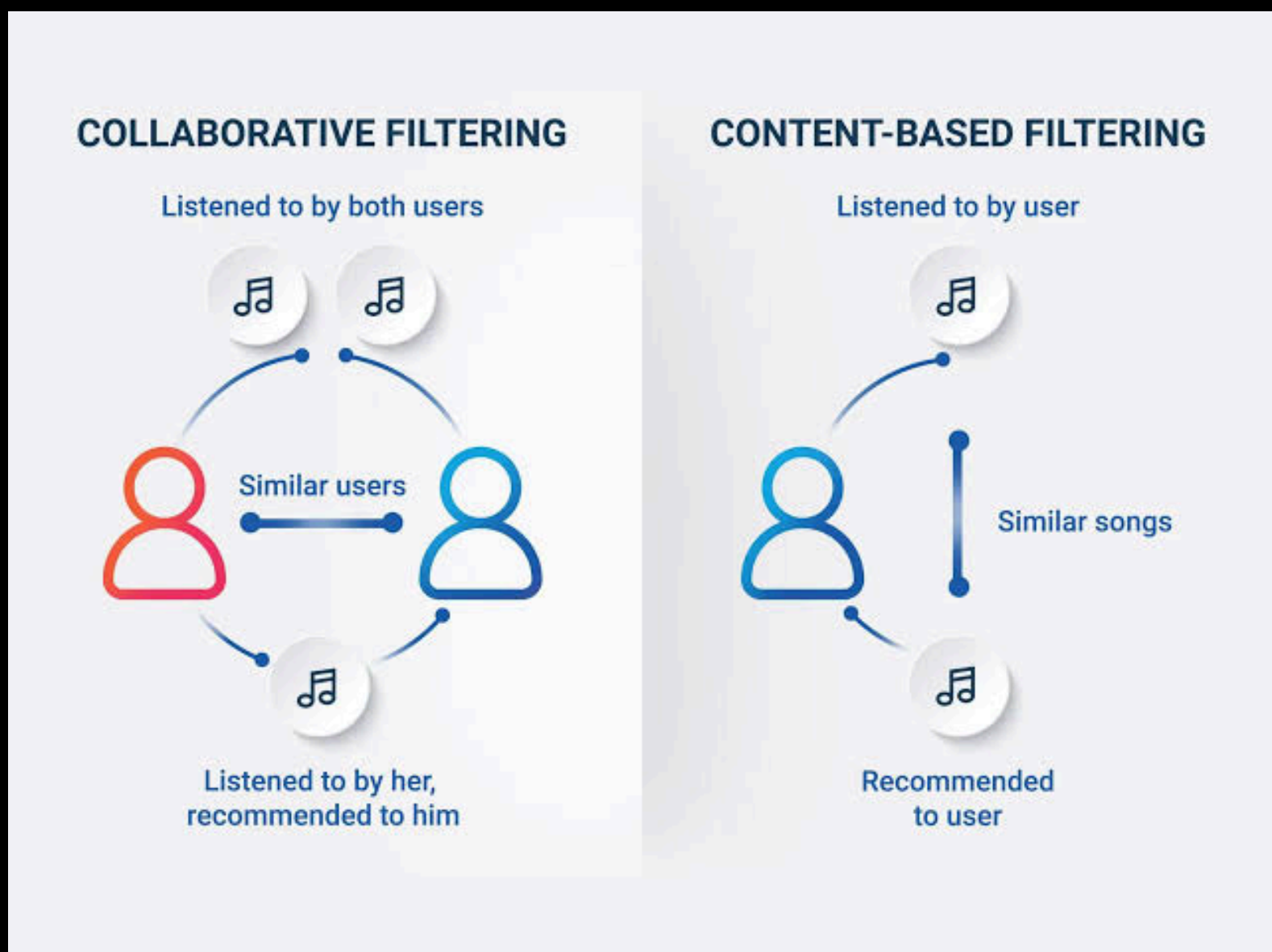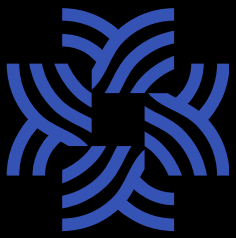
> 🔘 DEEP LEARNING: TEACHING MACHINES TO THINK!
>
> 🗣️ POWERING YOUR VOICE ASSISTANT
> 🎨 CREATING ART WITH AI
> FROM CAT PICS TO CANCER DETECTION

INTRODUCTION

DEEP LEARNING:

- DEEP LEARNING, A SUBSET OF MACHINE LEARNING, FOCUSES ON ALGORITHMS INSPIRED BY THE STRUCTURE AND FUNCTION OF THE BRAIN CALLED ARTIFICIAL NEURAL NETWORKS.

- IT HAS REVOLUTIONISED VARIOUS FIELDS, SUCH AS COMPUTER VISION, NATURAL LANGUAGE PROCESSING, AND ROBOTICS.

- DEEP LEARNING MODELS CAN AUTOMATICALLY EXTRACT FEATURES FROM RAW DATA, MAKING THEM HIGHLY EFFECTIVE FOR COMPLEX TASKS LIKE IMAGE RECOGNITION, SPEECH SYNTHESIS, AND AUTONOMOUS DRIVING.

Swipe

MOTIVATION

- <u>**CAREER OPPORTUNITIES:**</u> **DEEP LEARNING EXPERTISE IS IN HIGH DEMAND ACROSS INDUSTRIES, FROM TECH GIANTS TO STARTUPS. IT OPENS DOORS TO ROLES LIKE DATA SCIENTIST, MACHINE LEARNING ENGINEER, AI RESEARCHER, AND MORE.**

- <u>**INNOVATION AND IMPACT:**</u> **DEEP LEARNING DRIVES INNOVATION, SOLVING PREVIOUSLY THOUGHT UNSOLVABLE PROBLEMS. IT CAN BE APPLIED TO HEALTHCARE, FINANCE, ENTERTAINMENT, AND MANY OTHER SECTORS, MAKING A SIGNIFICANT IMPACT.**

- <u>**CONTINUOUS LEARNING:**</u> **DEEP LEARNING RAPIDLY EVOLVES WITH NEW RESEARCH, TOOLS, AND TECHNIQUES. THIS ENSURES CONTINUOUS LEARNING AND GROWTH FOR THOSE PASSIONATE ABOUT TECHNOLOGY AND AI.**

You can't

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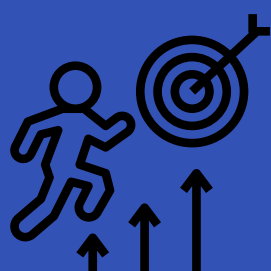
ROAD MAP

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 **CORE DEEP LEARNING CONCEPTS**

- **NEUTRAL NETWORKS:** LEARN ABOUT PERCEPTRONS, ACTIVATION FUNCTIONS, AND BACKPROPAGATION.
- **DEEP NEUTRAL NETWORKS:** STUDY ARCHITECTURES LIKE CNNS, RNNS, LSTMS, AND GANS.
- **FRAMEWORKS:** GAIN HANDS-ON EXPERIENCE WITH FRAMEWORKS LIKE TENSORFLOW, PYTORCH, AND KERAS.

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ROAD MAP

③ **PRACTICAL IMPLEMENTATION**

- **PROJECTS:** WORK ON REAL-WORLD PROJECTS LIKE IMAGE CLASSIFICATION, SENTIMENT ANALYSIS, AND LANGUAGE TRANSLATION.
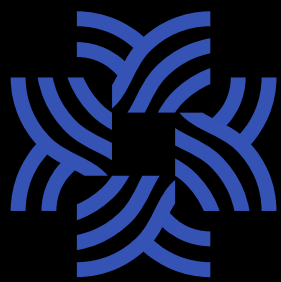- **COMPETITIONS:** PARTICIPATE IN PLATFORMS LIKE KAGGLE TO APPLY YOUR SKILLS AND LEARN FROM OTHERS.

④ **ADVANCED TOPICS**

- **MODEL OPTIIMIZATION:** TECHNIQUES LIKE REGULARISATION, DROPOUT, AND HYPERPARAMETER TUNING.
- **DEPLOYMENT:** LEARN HOW TO DEPLOY MODELS USING CLOUD SERVICES AND EDGE DEVICES.
- **RESEARCH PAPERS:** STAY UPDATED WITH THE LATEST RESEARCH BY READING PAPERS.

ROAD MAP

5 SPECIALIZATION

- CHOOSE A NICHE WITHIN DEEP LEARNING, SUCH AS COMPUTER VISION, NATURAL LANGUAGE PROCESSING, OR REINFORCEMENT LEARNING, AND DEEPEN YOUR EXPERTISE.

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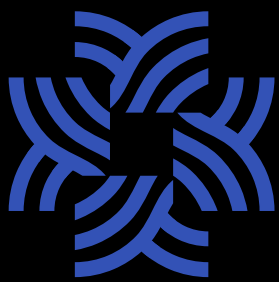
Epoch

RESOURCES

100 Days of Machine Learning

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

100 Days of Deep Learning

CampusX
80 videos   1,830,850 views   Updated today

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SUGGESTIONS

- IT MIGHT LOOK LIKE A LOT, BUT BUILDING EVERYTHING STEP BY STEP MAKES IT MUCH EASIER.

- HAVE A GOOD GRIP ON YOUR BASICS LIKE NUMPY, PANDAS, AND MACHINE LEARNING FUNDAMENTALS.

- IT'S CRUCIAL TO UNDERSTAND THE CONCEPTS THOROUGHLY BEFORE DIVING INTO CODING.

- ONCE YOU FEEL GOOD WITH THE THEORY PART, REGULARLY WORK ON PROJECTS AND EXPERIMENTS TO APPLY THEORETICAL KNOWLEDGE.

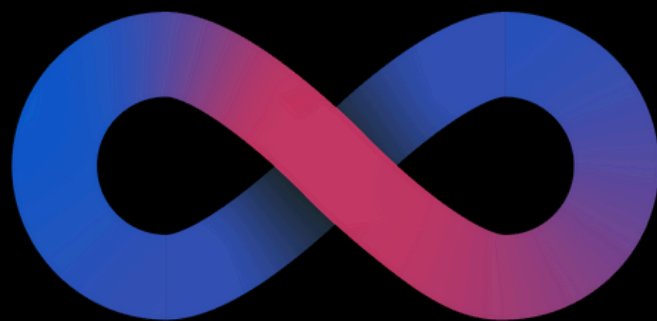- IF YOU FEEL STUCK, DON'T FEEL SHY ABOUT SEEKING HELP FROM THE INTERNET OR YOUR SENIORS.

- DO NOT FORGET TO UPDATE YOUR KNOWLEDGE OF GROWING TECHNOLOGY.

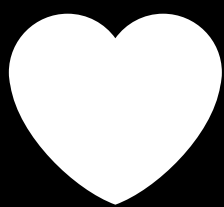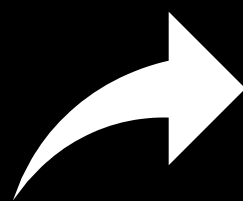# Want to know more?

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