

# Online Course on Machine Learning, Deep Learning and Neural Networks

## Day 1

Conducted by

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**#iitKLIV**  
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# Agenda

1. Demystifying Learning
2. Need for learning
3. What does learning means?
4. Practical Use cases of Machine Learning

# Visual Cliff Experiment



- Gibson and Walk (1960), Cornell University.
- Depth perception in human and other animal species.
- Experiment  $\leftrightarrow$  Learning ?
- Learning:  
“do task -> fail -> experience -> repeat till success”

# Need for Learning



- Blocks of Learning:
  - Information
  - Knowledge
  - Experience

# Need for Machines

- Data/ Speed of computing
- Time (Latency)
- Services / Applications



# Learning

A computer program is said to **learn** from **experience E** with respect to some class of **tasks T** and performance **measure P**, if its performance at tasks in **T**, as measured by **P**, improves with experience **E**

*-Tom Mitchell*

## Applications of Machine Learning in our day to day life



Google Maps

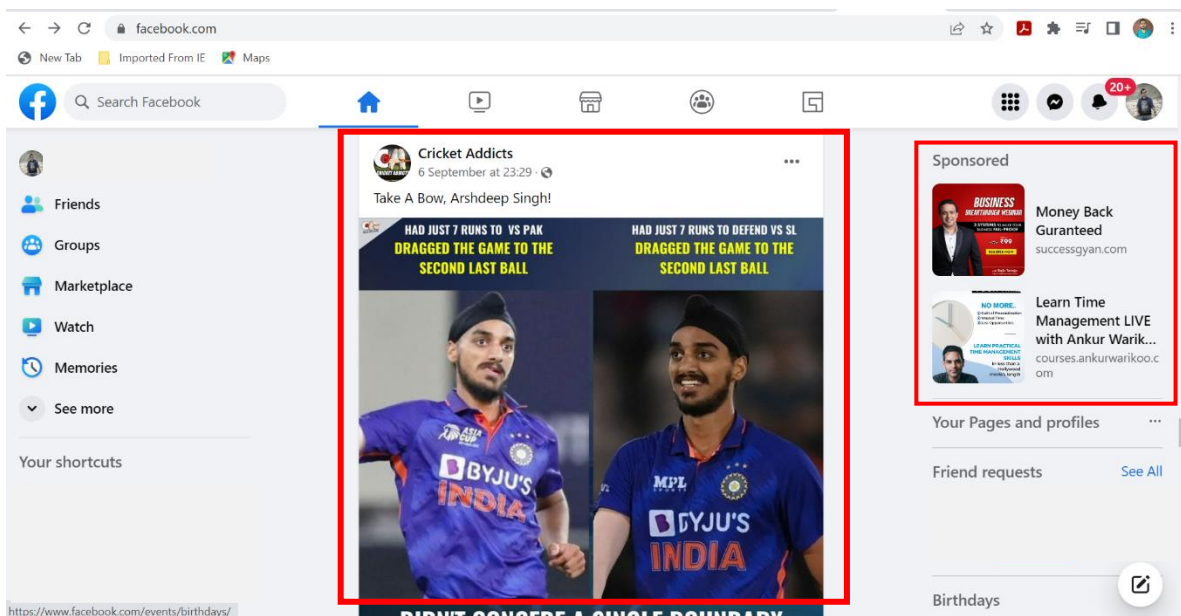


Voice Recognition

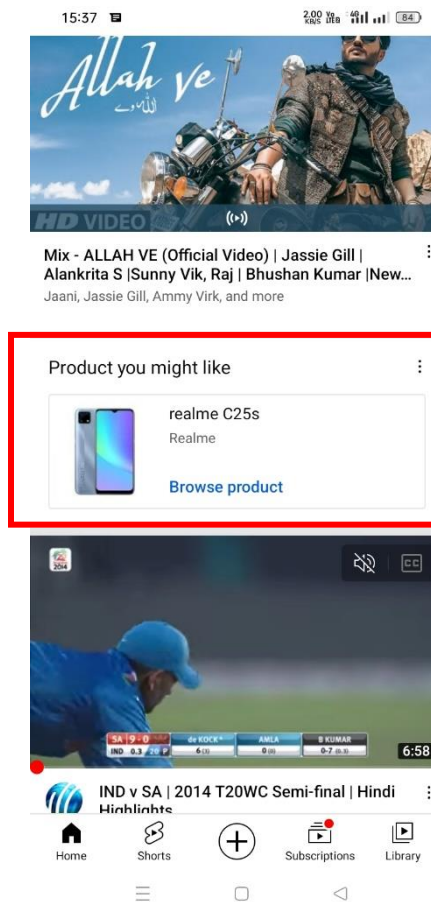


Finger Print Recognition

# Importance of Data



Facebook



YouTube



## Why its important to study ML now

- ✓ Abundant amount of data
- ✓ High Computational Resources
- ✓ Growing progress in the available platforms and algorithms
- ✓ Increase support from industry
  - ✓ Facebook: 10 Million Photos uploaded per hour
  - ✓ YouTube: 1 hour of video uploaded every minute
  - ✓ Google: 24 Peta bytes of data per day
  - ✓ Twitter 400 Million tweets per day

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# Thank You

For your Attention!

## Any Questions?

