

Online Value Added Course on Machine Learning, Deep Learning and Neural Networks

Day 2

Conducted by

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Agenda

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



RECAP

Slides & Discussion:

- Website and android application: <https://tophat.com/>
- Course Code: 981780
- Tutorials: [https://github.com/anupam-kliv/Foundatations of ML DL Down Town University](https://github.com/anupam-kliv/Foundatations_of_ML_DL_Down_Town_University)

Attendance

- Either Tophat

Students can communication via email

- Tophat
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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

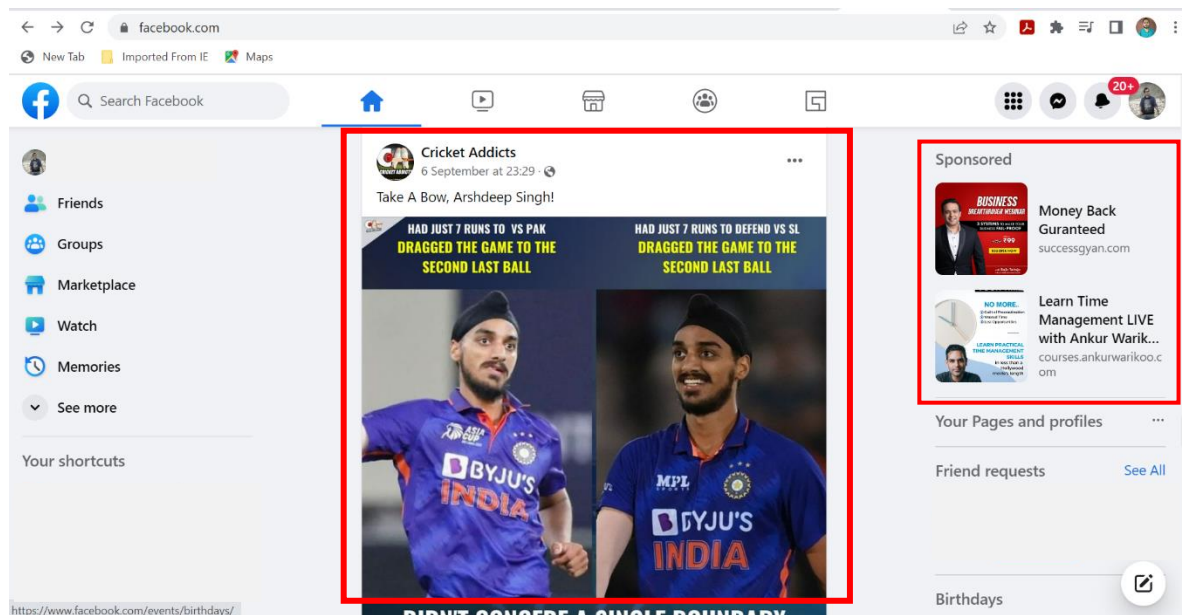


Voice Recognition

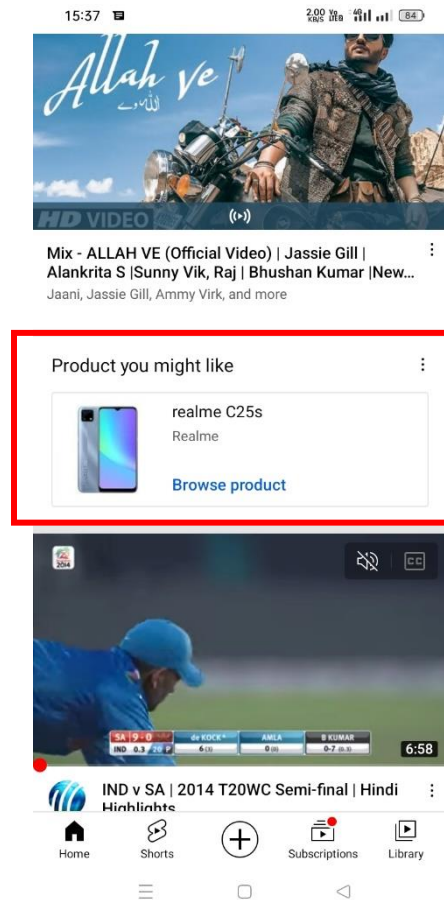


Finger Print Recognition

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

Types of Machine Learning

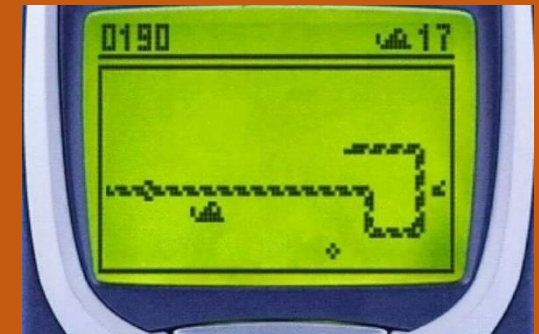
Supervised Learning



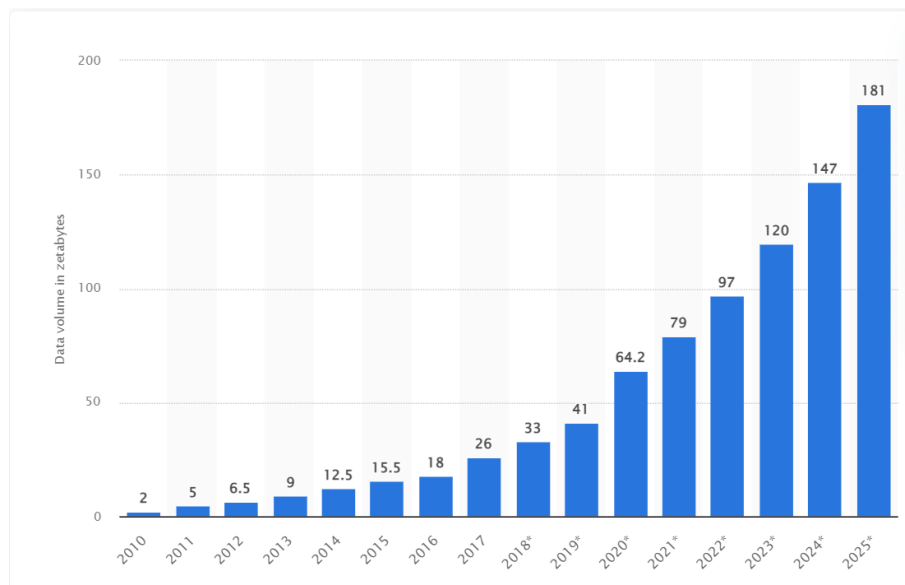
Un-supervised Learning



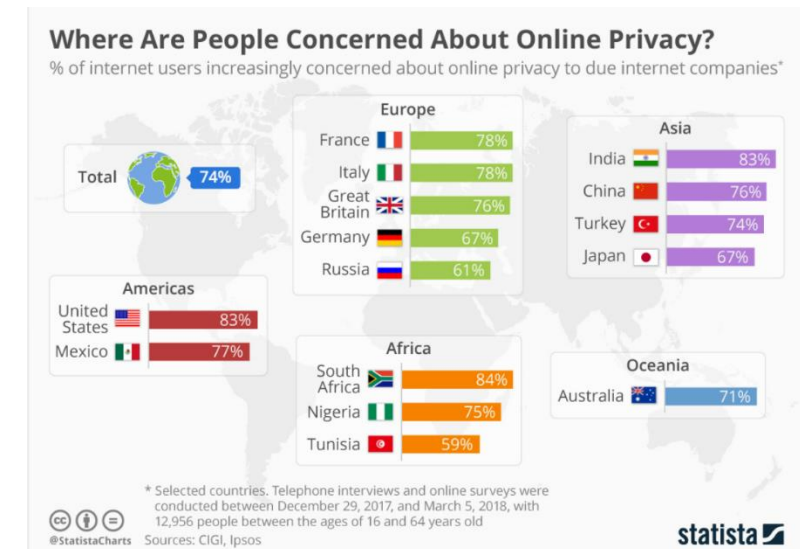
Reinforcement Learning



Importance of Data & Privacy



Growth of Data Generation



Privacy Concerns

How to bridge this gap? Data vs privacy --- Open research problem



Thank You

For your Attention!

Any Questions?

