



Dayananda Sagar College of Engineering

Department of Computer Science & Engineering

INVITES YOU TO JOIN OUR WEBINAR ON:

“ Getting started with Deep Learning with industry expectations and Best practices ”



9th JAN, 2021



11 AM

Link (Google Meet) : meet.google.com/kvb-dett-ztr



Speaker

**Mohammed Ataaur
Rahaman**

**Machine Learning Data
Engineer@ Blueoptima,
Bangalore**

Dr. Ramesh Babu D.R

Vice Principal, DSCE

Dr. C.P.S. Prakash

Principal, DSCE

Get Started with Deep Learning

with Insights on Industry Practices & Expectations

Organiser: Mrs. Swetha MD

Presenter: Mohammed Ataur Rahaman

Assistant: Mohammad Mashhood Alam

Motivation

Take away

The Art & Science of asking
questions is the source of all
knowledge - Thomas Berger

- What's so fuzzy about AI?
 - What opportunities does it create?
 - How do I prepare myself and where do I start?
-
- What to do during the webinar?
 - Get comfortable and be friendly
 - Have a Notebook and a pen.
 - Do a favour to yourself by asking questions.

Agenda

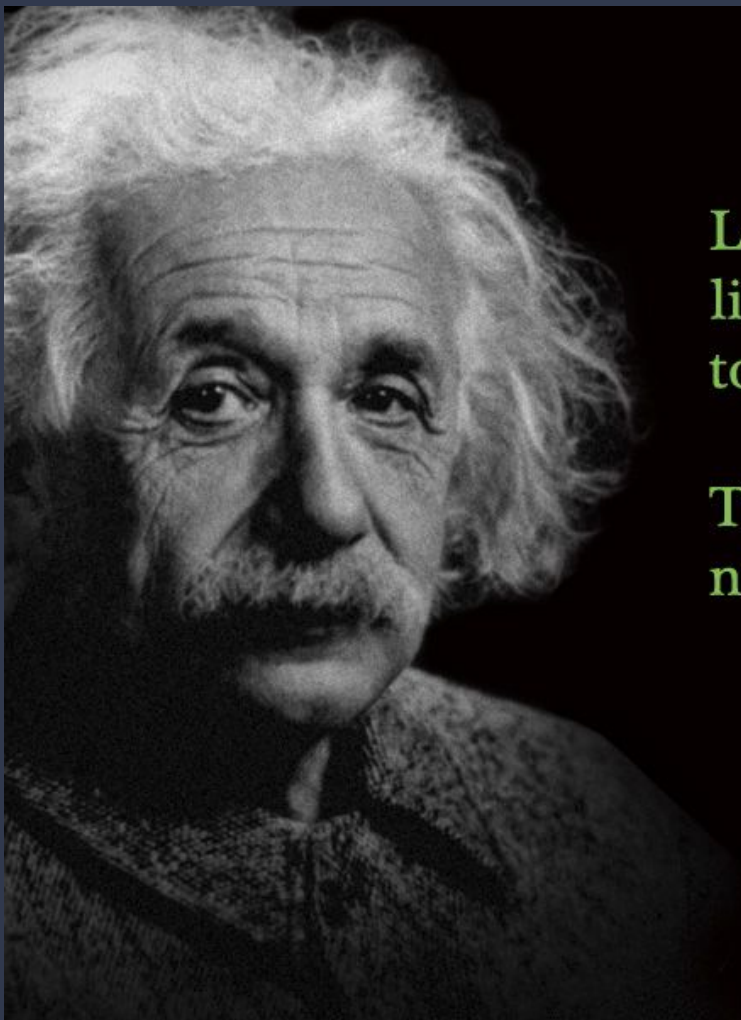
- Phase I

- Background of AI
- Opportunities around AI
- Basics of Neural Networks
- What is Tensorflow

5 mins Water Break

- Phase II

- Demo of Neural Nets and its Types
- Expectations of the Industry
- Placement Preparation
- Q&A



Learn from yesterday,
live for today, hope for
tomorrow.

The important thing is
not to stop questioning.

– Albert Einstein

What is AI?



"It's the first inning. It might even be the first guys up at bat. We're on the edge of the golden age [of A.I.]."

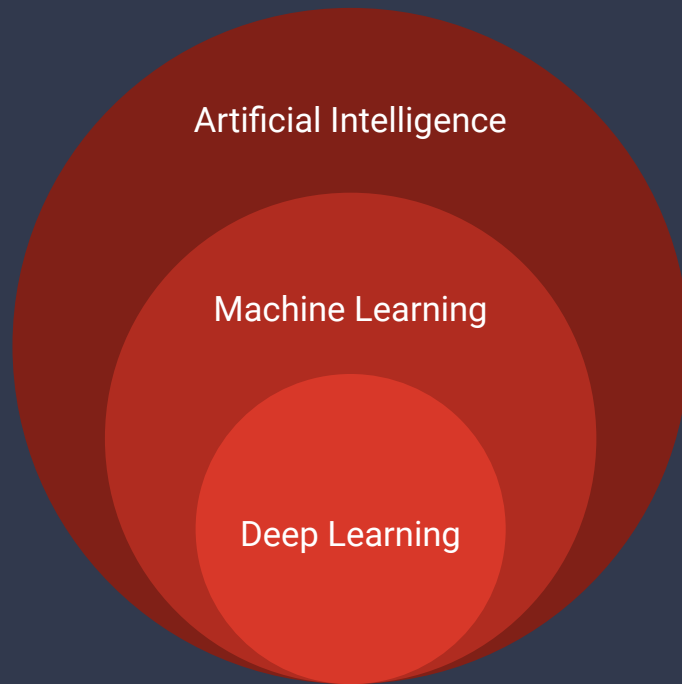
- Jeff Bezos, CEO, Amazon



"In the long run, I think we will evolve in computing from a mobile-first to an A.I.-first world."

- Sundar Pichai, CEO, Google

AI could double the annual economic growth rate by 2035, and boost labor productivity by up to 40 percent - [Accenture](#)



AI

ML

DL

Components

- ML, NLP
- Speech Recognition
- Computer Vision

Components

- Supervised Learning
- Unsupervised Learning
- Reinforcement Learning

Components

- ANN (Artificial NN)
- CNN (Convolution NN)
- RNN (Recurrent NN)

Applications

- AI in Games
- AI in Health
- AI in Gadgets

Applications

- Weather Forecast
- Youtube Recommendation
- Chess Bot

Applications

- Facial Recognition
- Self driving cars
- Speech Recognition

Machine Learning



Deep Learning

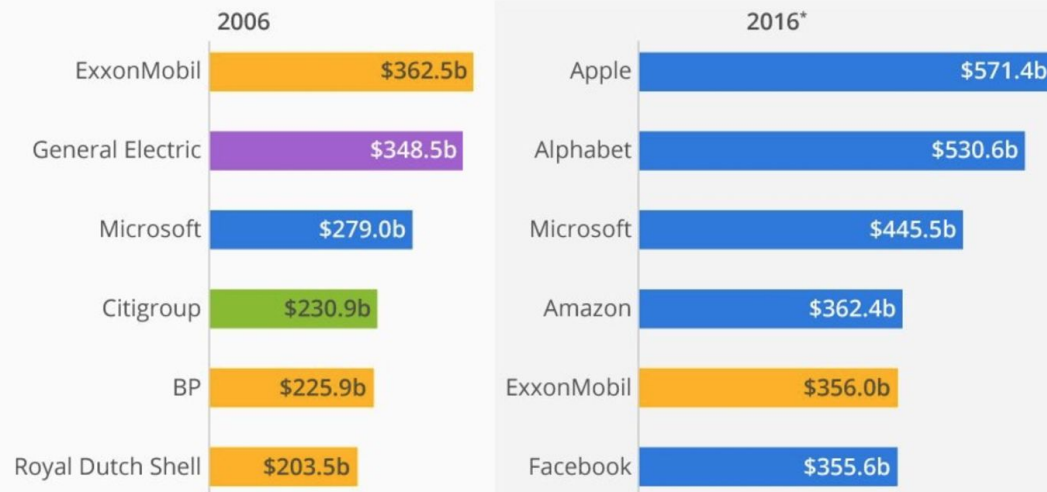


Currency of tomorrow?

The Age of Tech

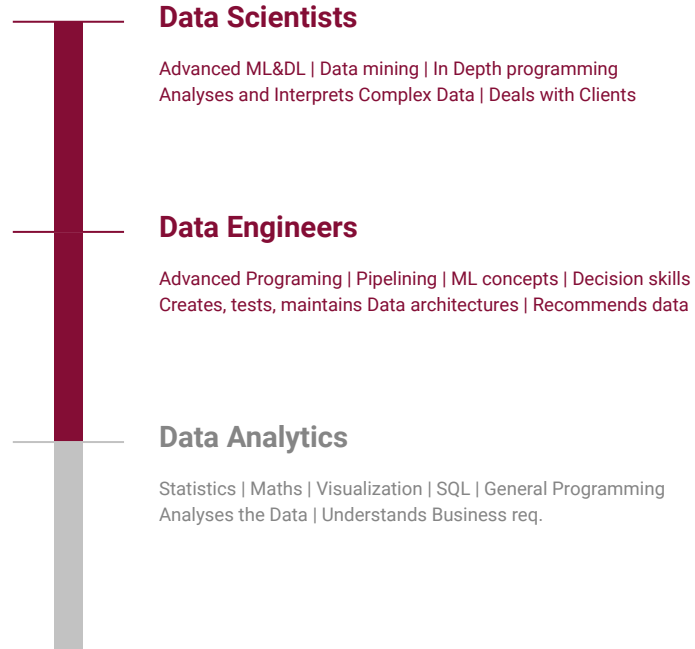
Market capitalization of the world's most valuable public companies

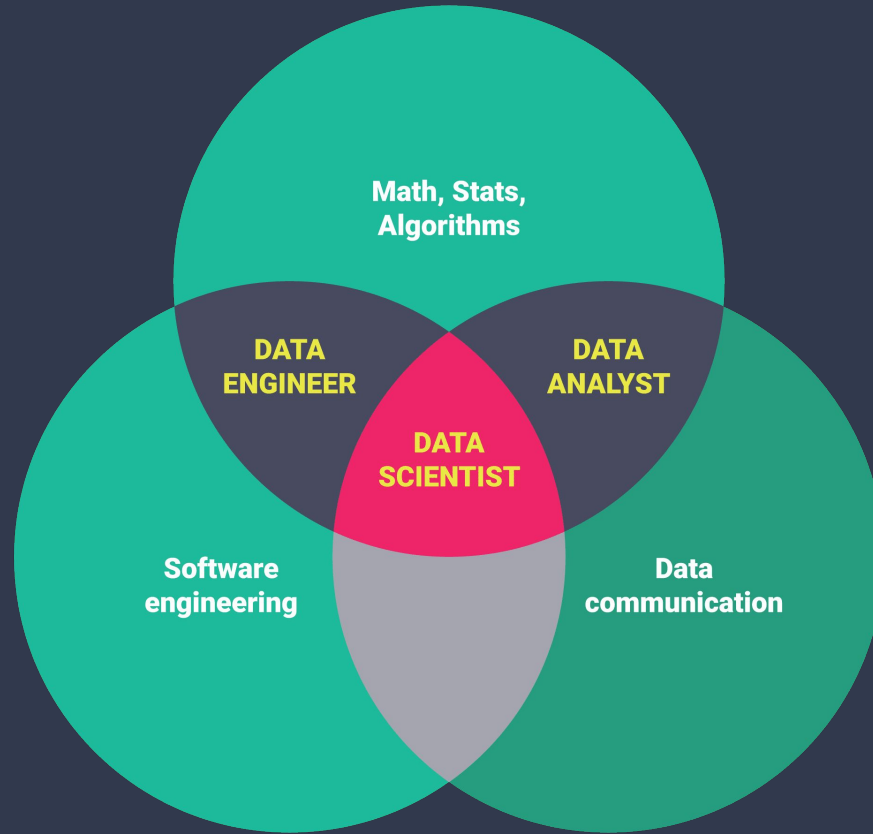
■ Tech ■ Oil/Energy ■ Financial Services ■ Conglomerate



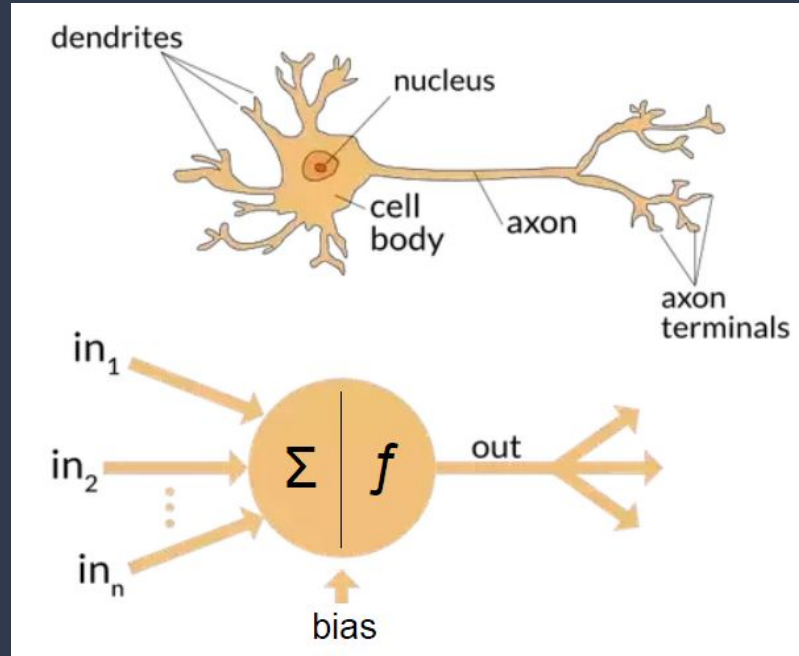
“Today, **Data** is not an output or a by-product but rather the **Fuel** running our business.”

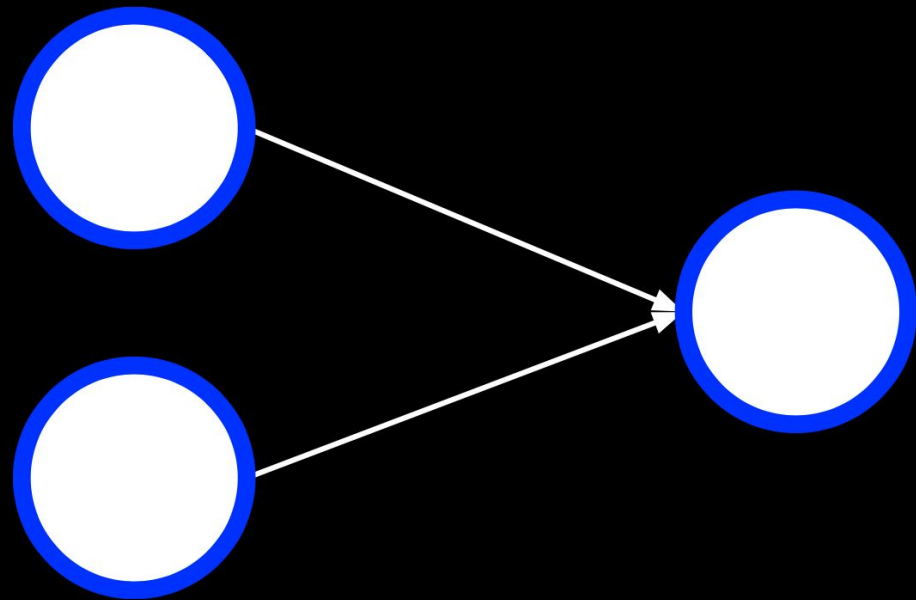
Data Keepers

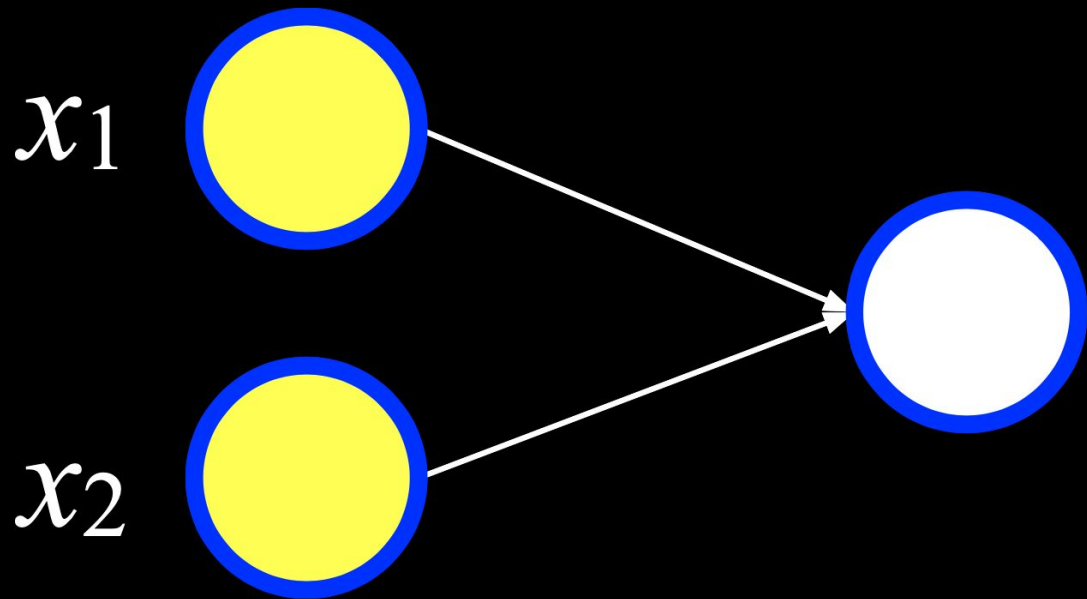


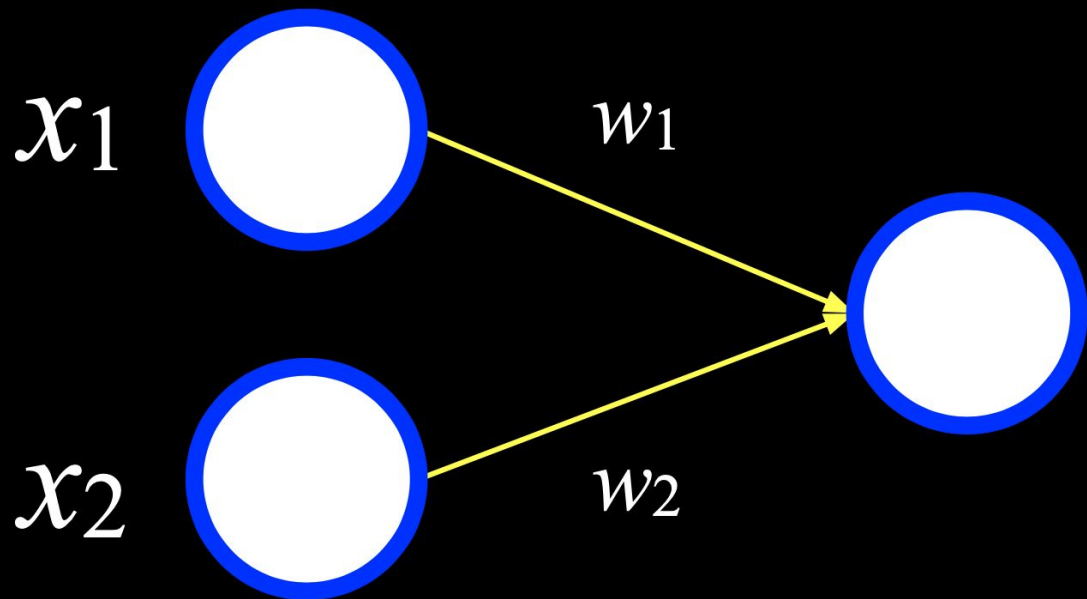


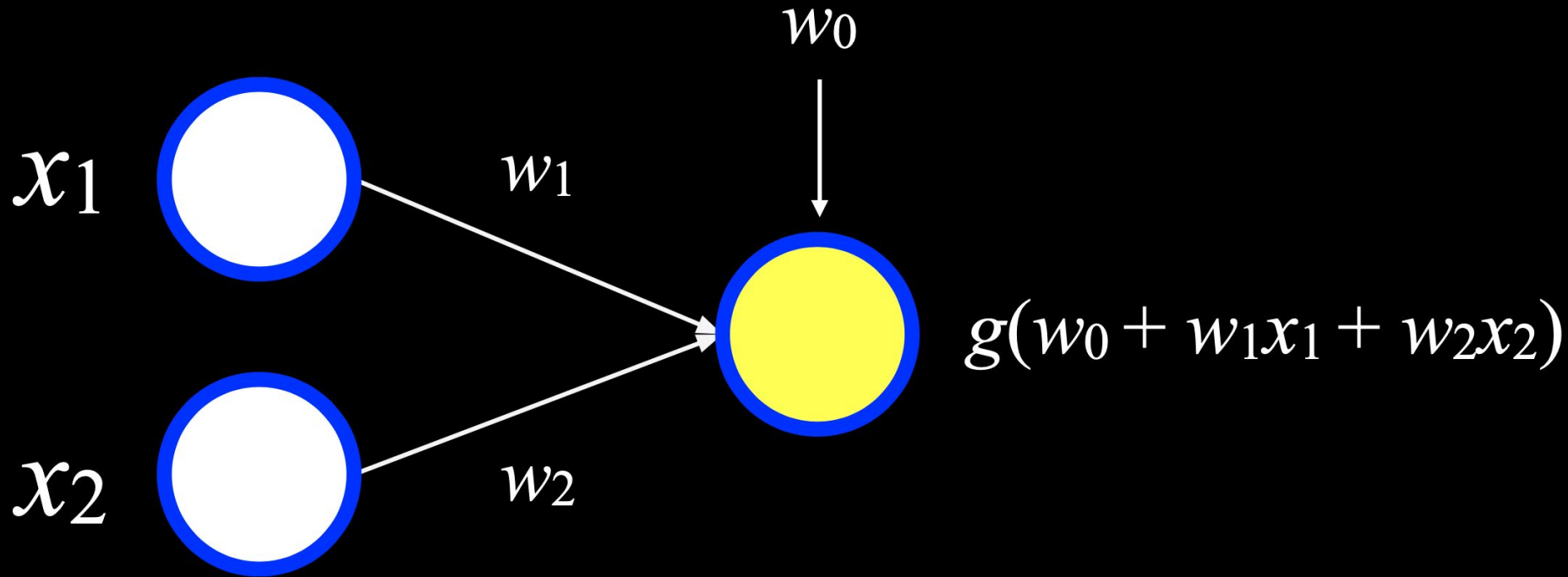
Neural Networks

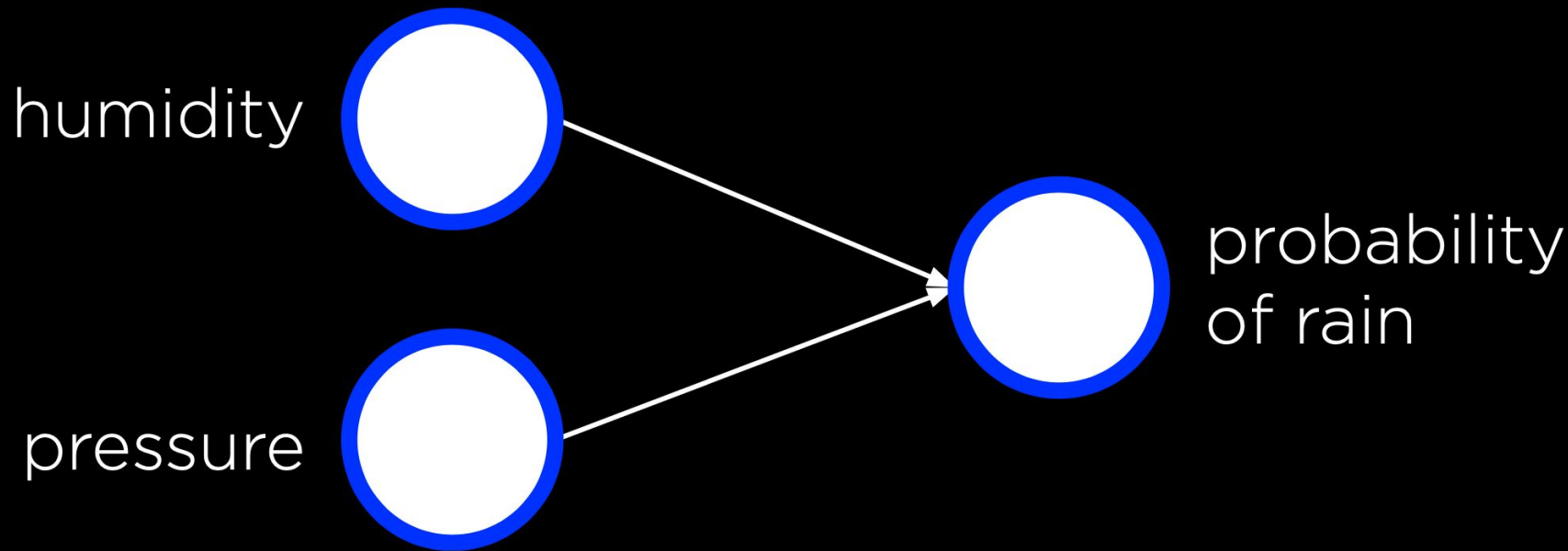




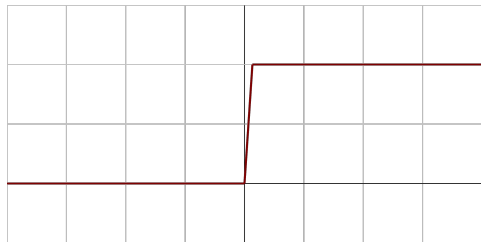




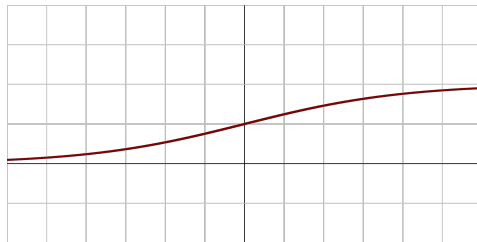




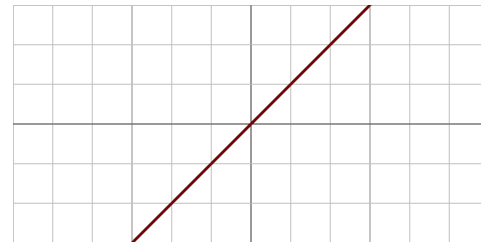
Activation Functions



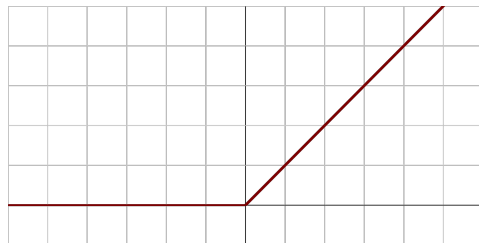
Binary Step



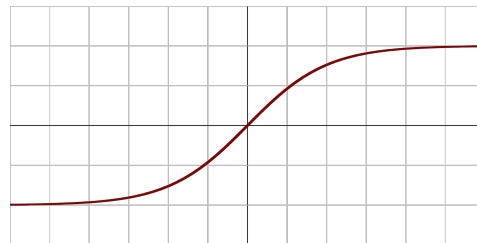
Sigmoid



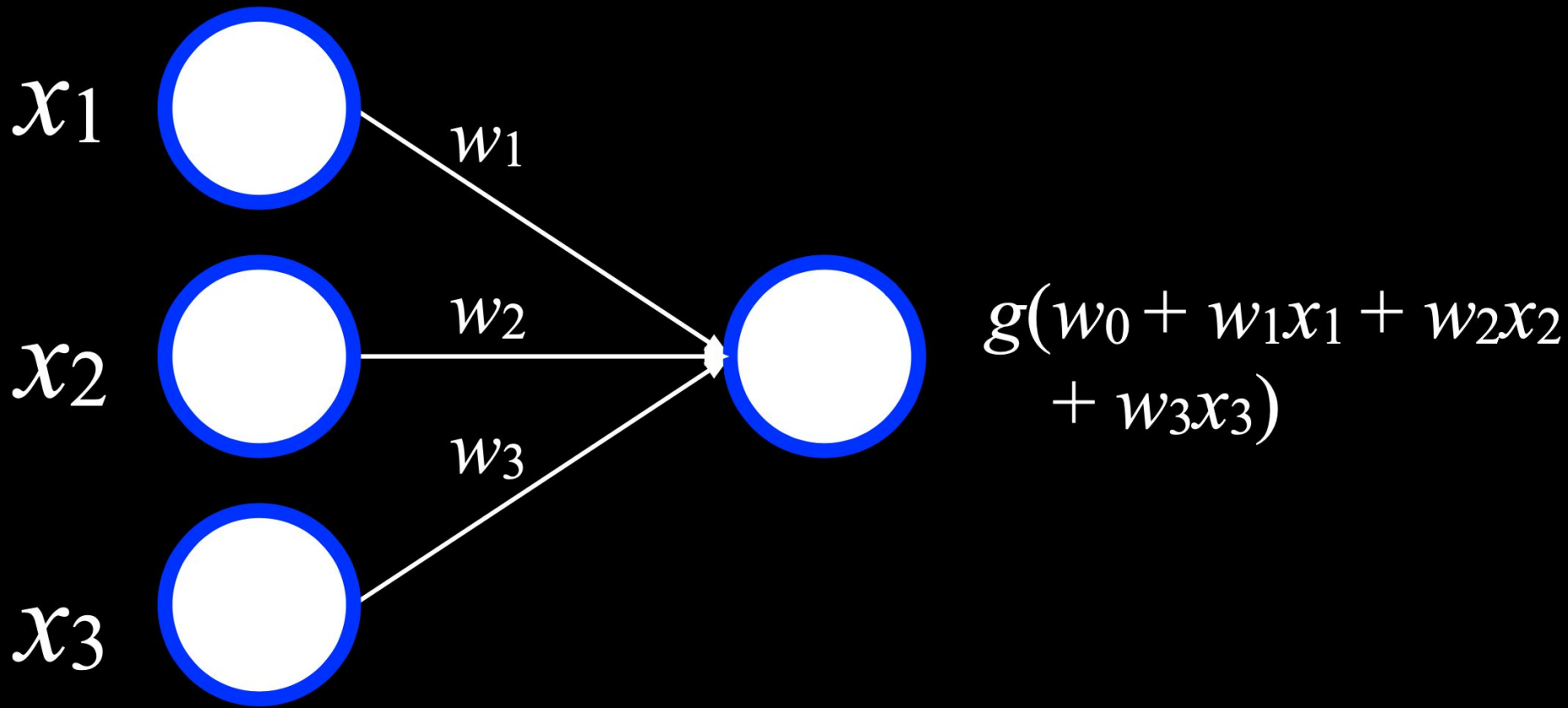
Linear



Rectified Linear Unit (ReLU)



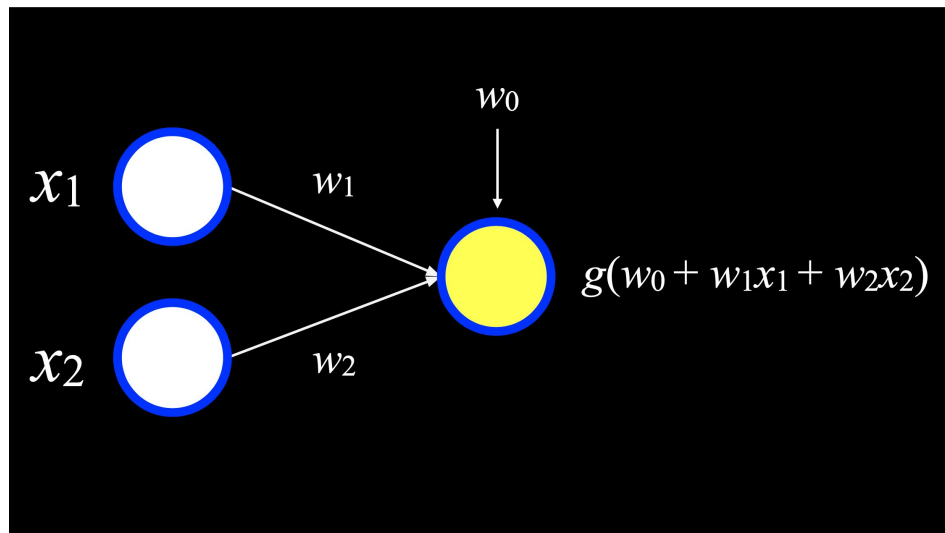
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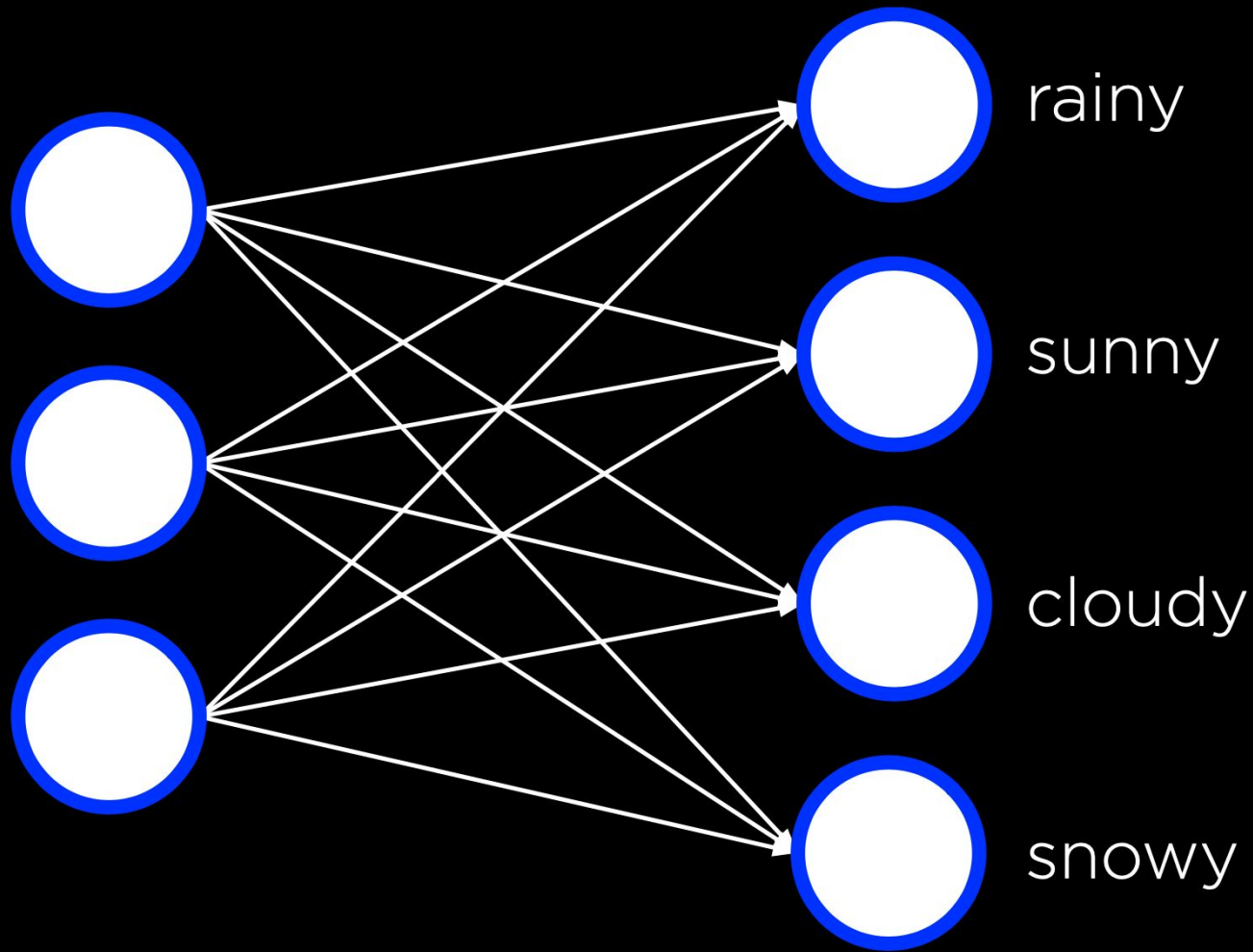


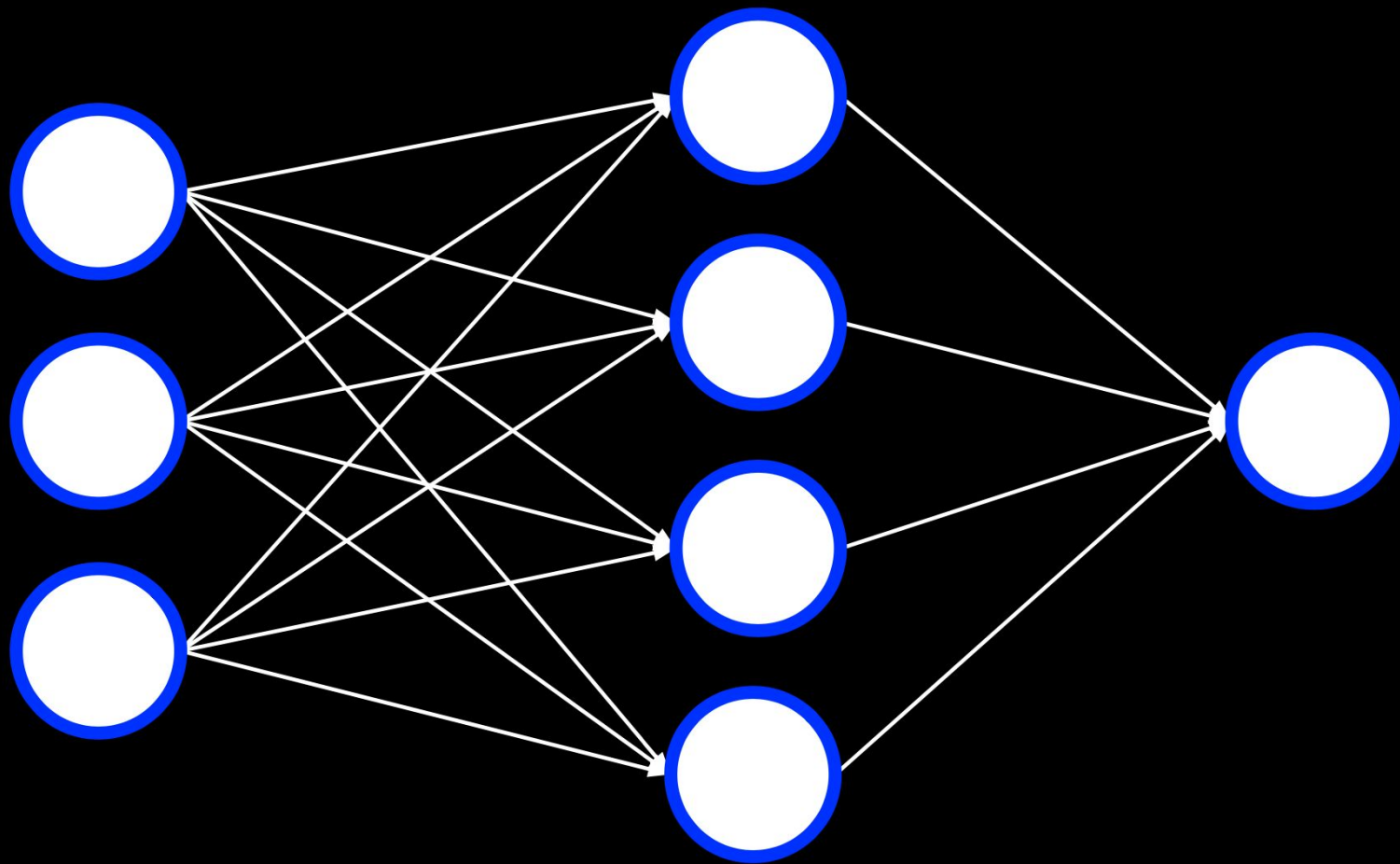
Let's Recap

Deep Learning

- Perceptron
- Weights and Bias
- Activation Functions







Let's Recap

How does the Neural Net learns?

- Backpropagation
 - Algorithm for training neural networks with hidden layers
- Gradient Descent
 - Helps in back propagating the error to minimize the cost

What helps to build these models?

Tensor Flow

<http://playground.tensorflow.org>



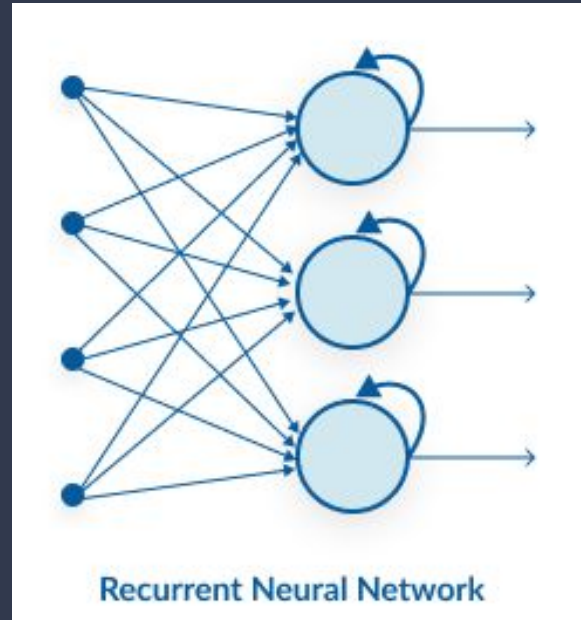
TensorFlow

Let's classify Bank Notes

Using Neural Network

Recursive Neural Networks

<https://captionbotdemo.azurewebsites.net>



Let's Recap

Types of Neural Networks

- ANN - Artificial Neural Network
- RNN - Recurrent Neural Network
- CNN - Convolutional Neural Network

Expectations of the Industry

- Learning is a continuous process
 - Beyond books
 - Explore the Internet
 - **Develop a unique skill**
 - **Up skill Daily**
- Work Ethics
 - Professionalism with Integrity
 - Responsibility

Building your Resume

- Skills the industry expects
 - Strong Data Structure & Algorithm
 - Reasoning skills
 - Decision making skills under pressure
- Skills you should have
 - Always store your project in **git** (big plus point)
 - Mention various projects (DB/ML/UI/MP) showcase **diversity** and **adaptability**.
 - Communication and presentation skills
- useful Tips
 - Keep the resume to 1 page
 - Put only the essentials
 - Take your time to build over iterations.
 - Get it reviewed by friends or family
 - Build your LinkedIn profile

Q & A

Keep in touch here

Ataa - <https://in.linkedin.com/in/ataago>

Mashhood -

<https://www.linkedin.com/in/mashhood-alam/>

- Learning Courses:
 - [CS50 - Introduction to CS \(For Beginners who want to boost confidence in CS\)](#)
 - [CS50 AI - \(For Intermediate and Experts to dwell into AI\)](#)
- Placement Preparation
 - Interviewbit - (For starters to get use to competitive coding)
 - Leetcode - (For Intermediate to focus on particular concepts)
 - Geeksforgeeks and HackerRank
- References from the Webinar
 - TensorFlow - <http://playground.tensorflow.org>
 - Captionbot - <https://captionbotdemo.azurewebsites.net>
 - Demo code - <https://github.com/MASHOD0/DSCEWebinar>

Thank You

Wish you the best!