

Target Output

Neural Network Model

# Approaching any Problem with NN

Training Data

Prediction

NN Weights  
Modification

Learning/Training  
Algorithm



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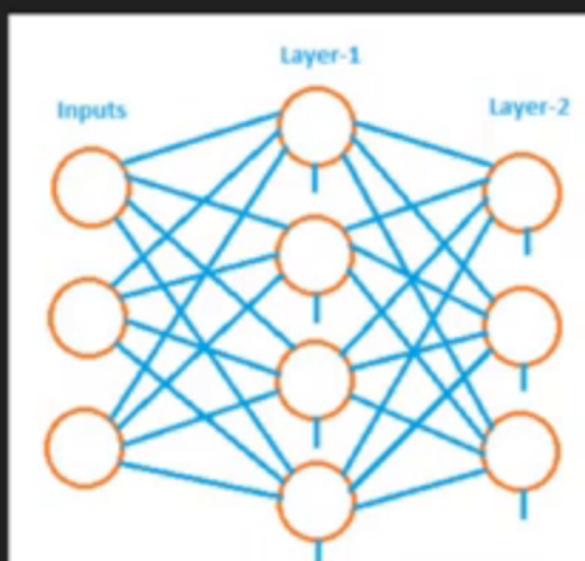
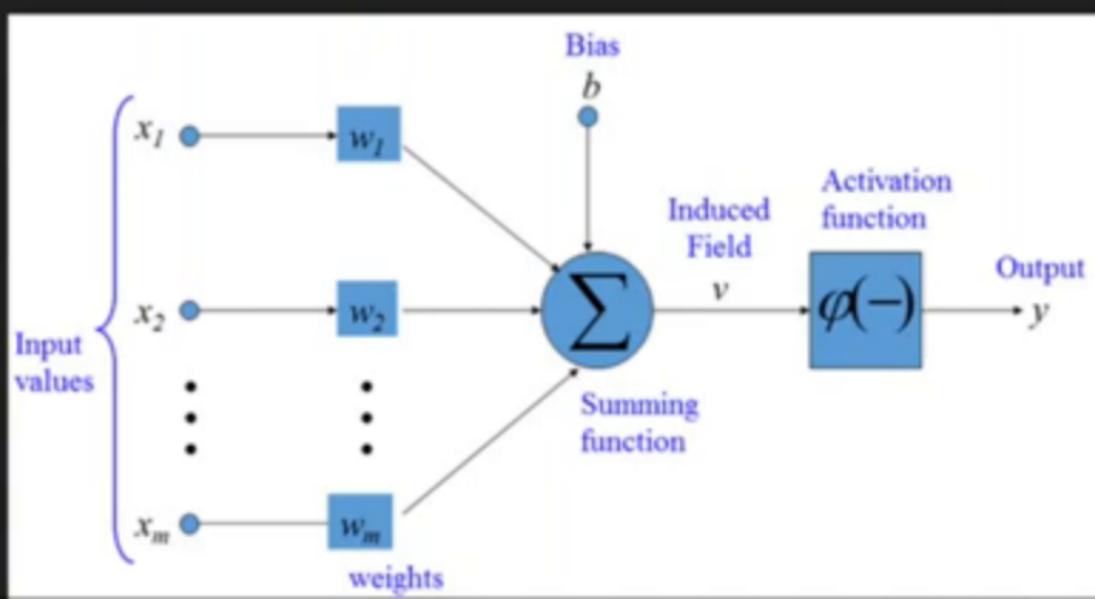
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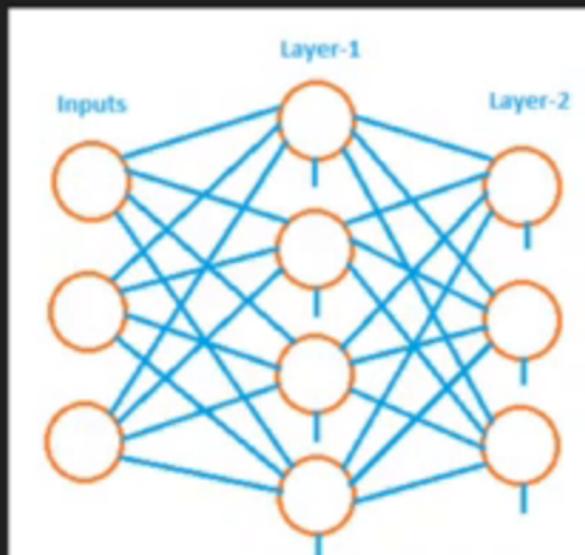
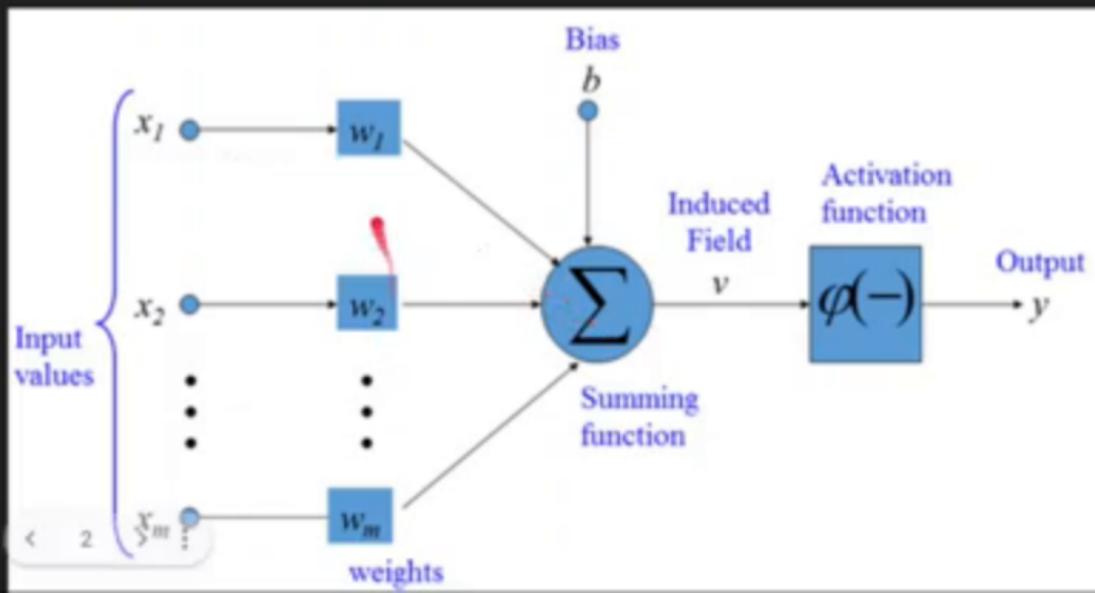
# Recap

- Coding a Neuron
- Components of a Neural Network
- Coding a Neural Network
- Activation Functions



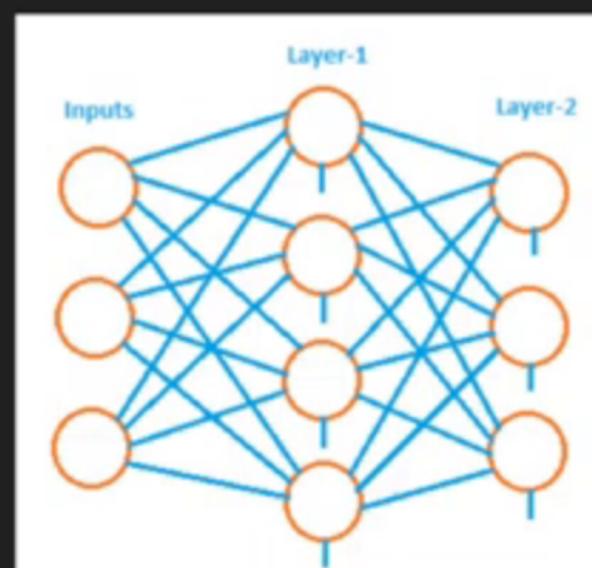
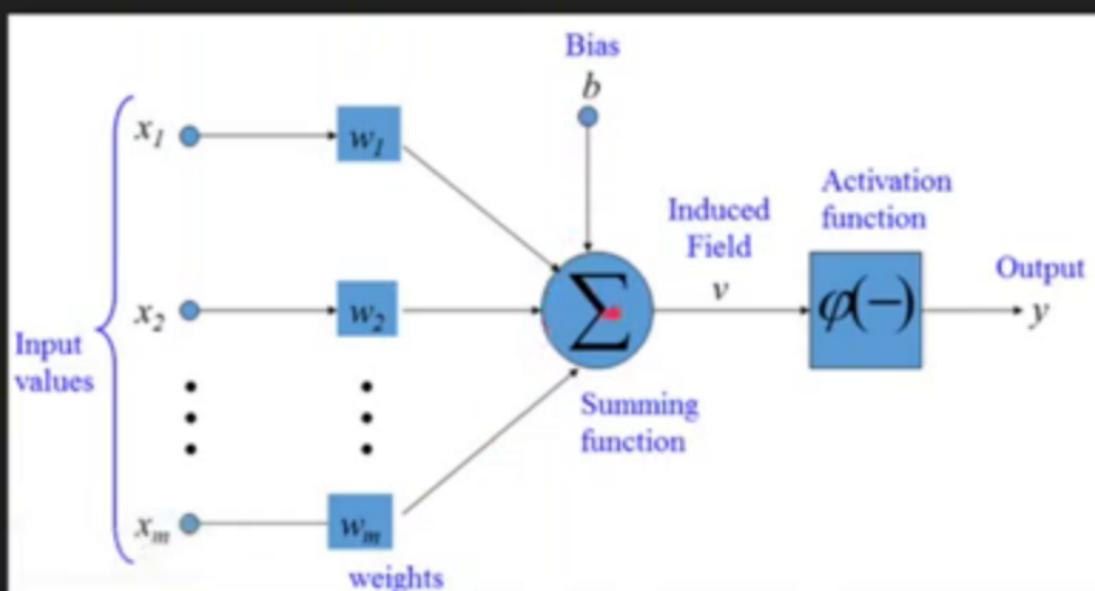
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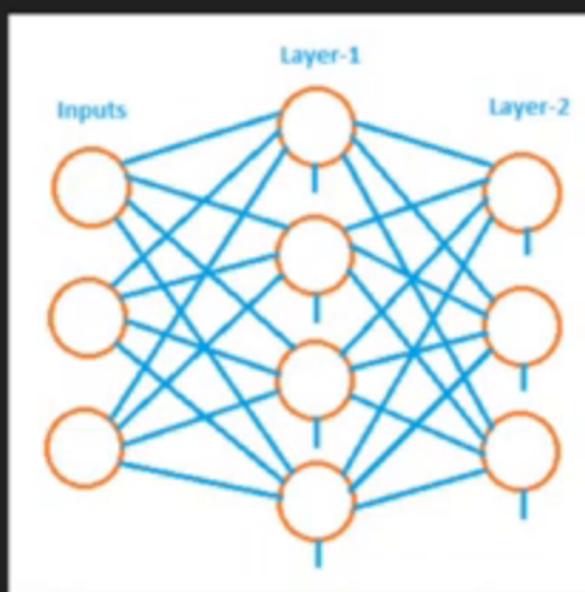
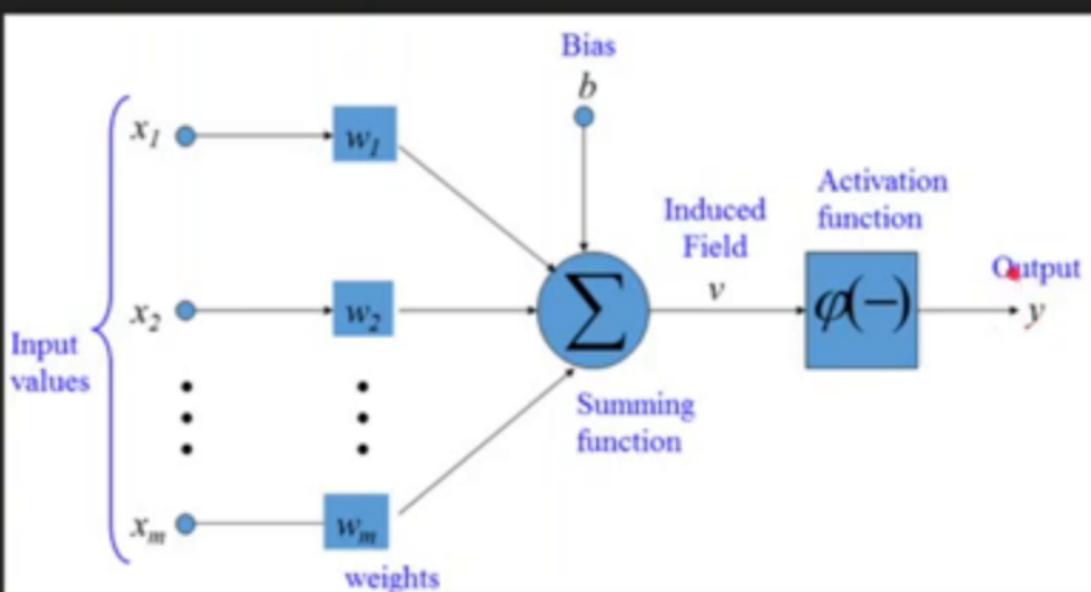
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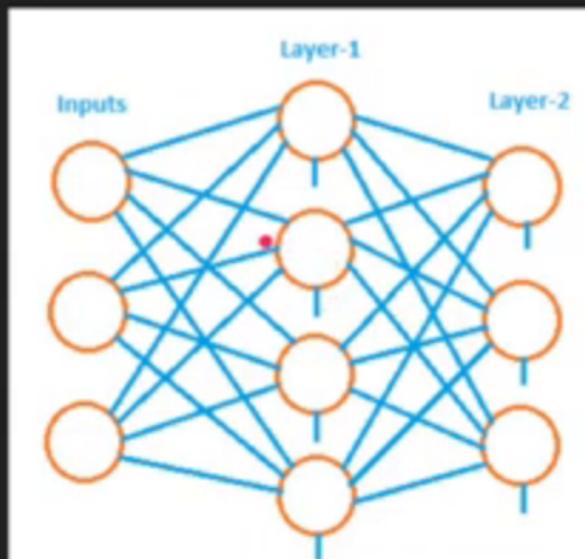
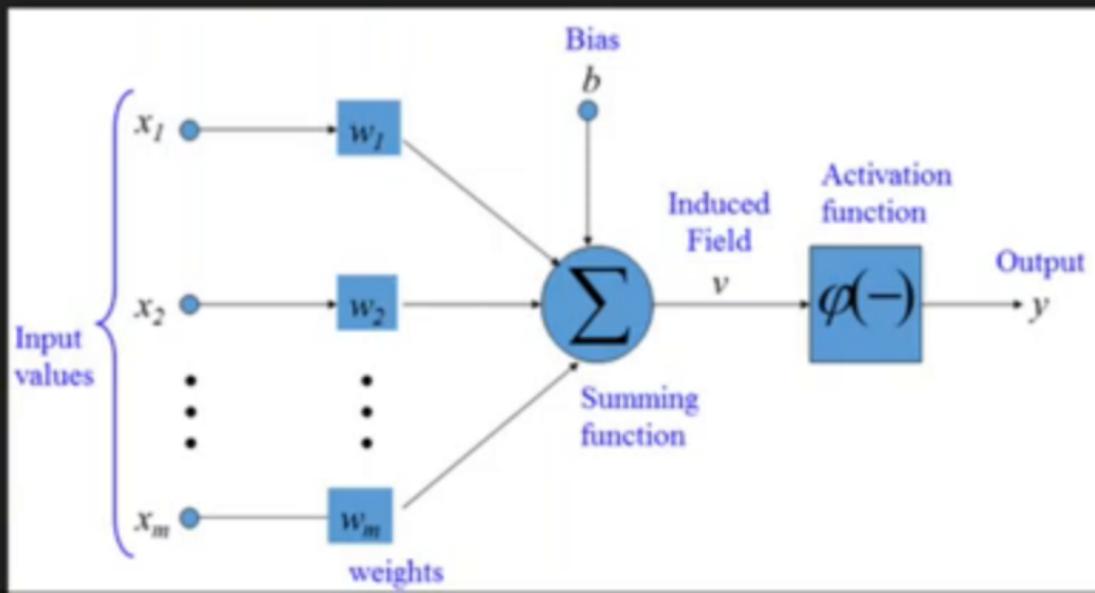
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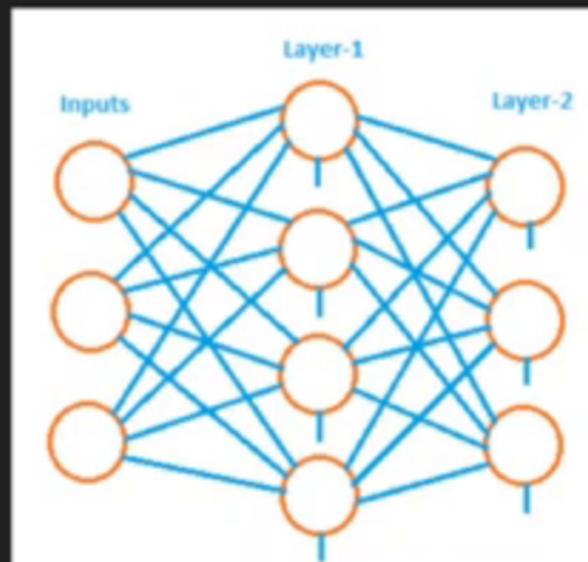
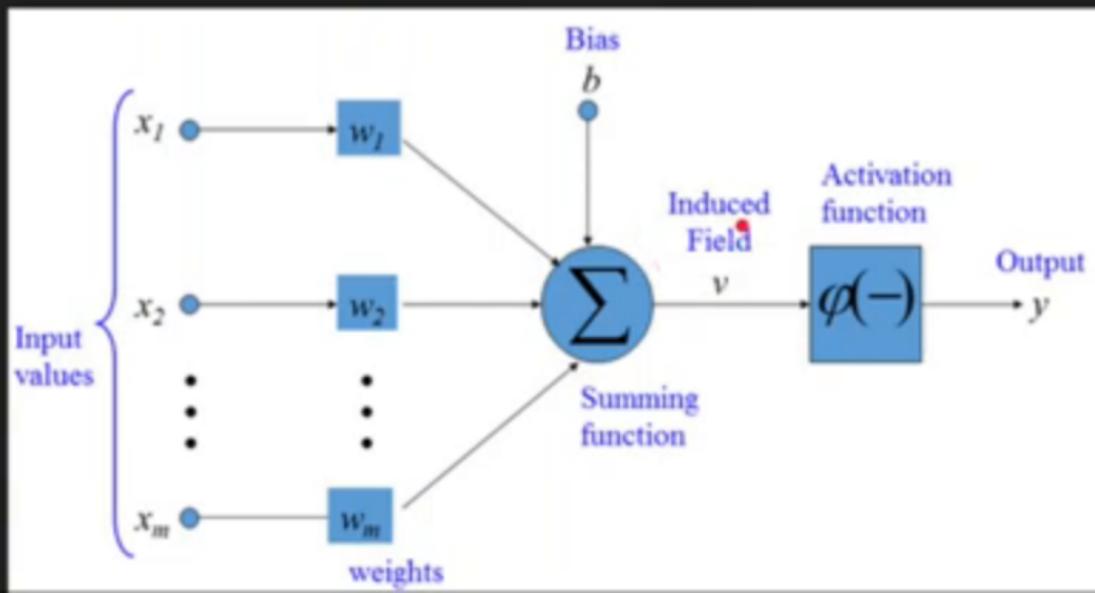
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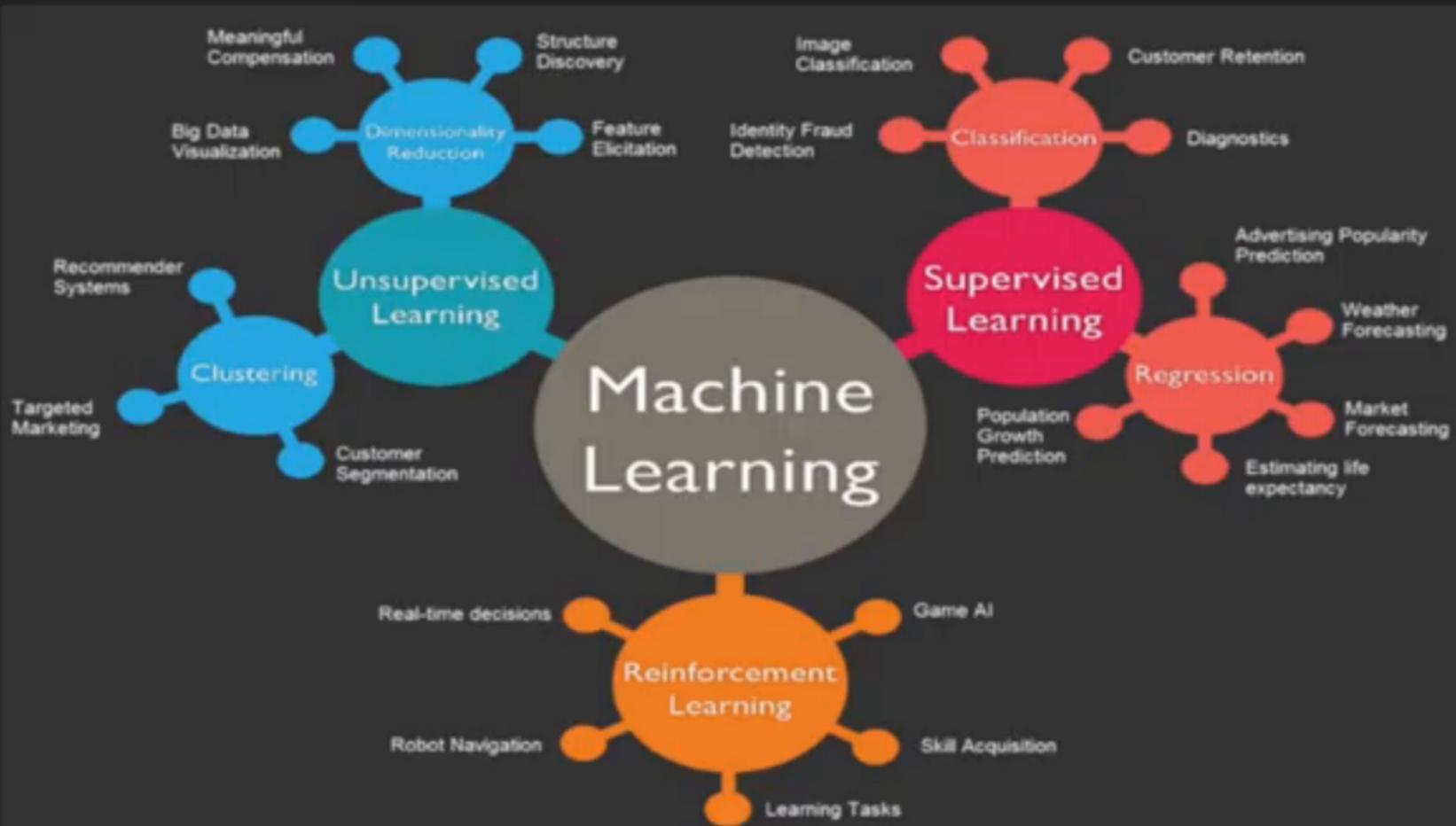
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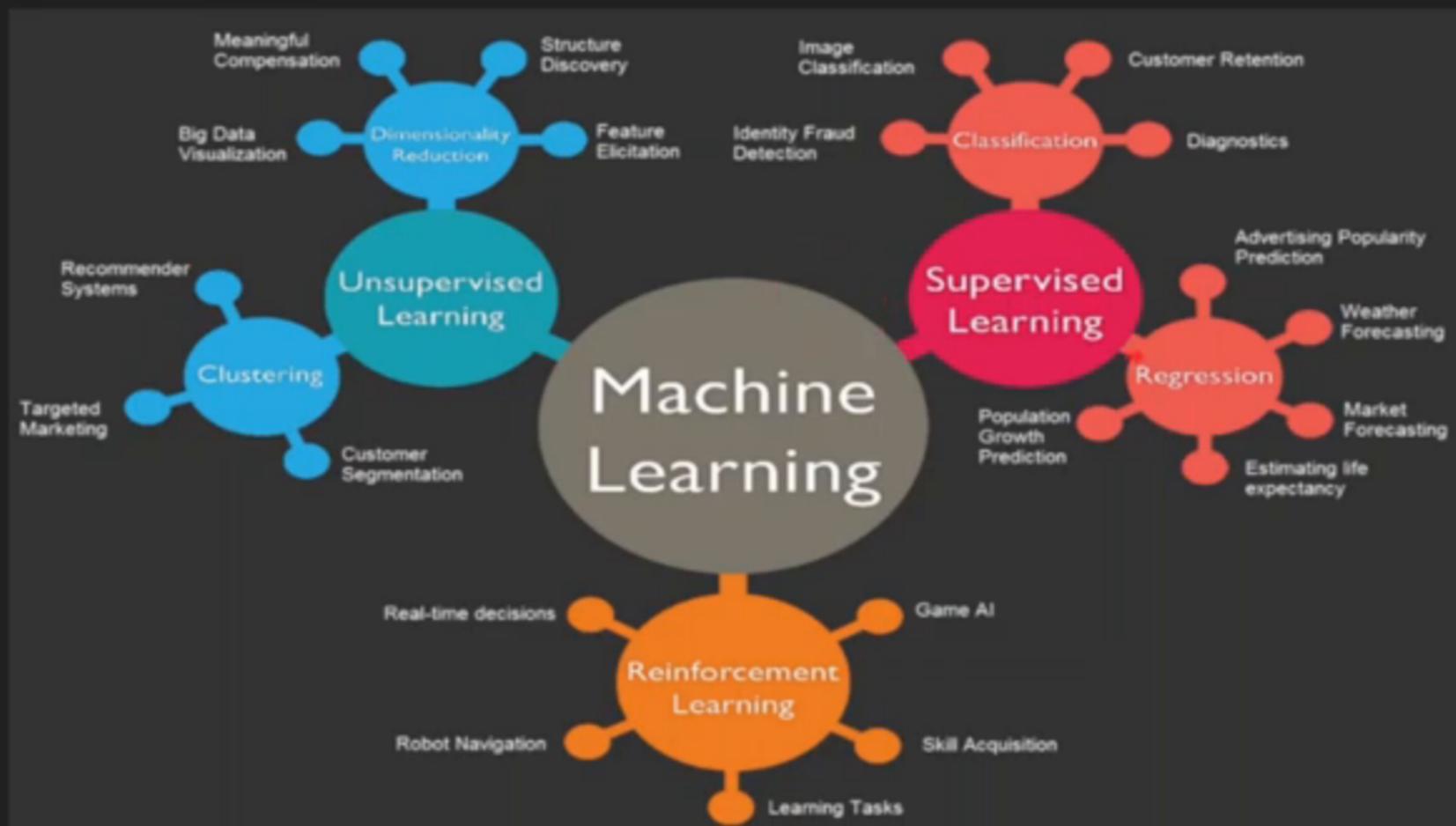


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- Components of a Neural Network
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## Classification

- Output - Category (Decision)
  - Output - Probability Score
- 
- Image Classification (cats vs dogs)
  - Spam vs Non-spam
  - Loan Sanction or Eligibility
  - Sentiment Analysis
  - Anomaly Detection

## Regression

- Output - Quantity or Value
  - Output - Real Number
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- Weather Forecasting
  - Market Forecasting
  - Population growth estimate
  - Sales Prediction
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# Loan Eligibility

Input Features:  
Age, Salary, Debts

Target or Label:  
Eligibility

S.No	Age	Salary (LPA)	Debts (Lakhs)	Eligibility
1	25	24	10	No
2	27	18	2	Yes
3	35	35	5	Yes
4	46	40	5	Yes
5	57	12	15	No
6	21	15	0	Yes
7	48	32	2	Yes
8	37	25	5	Yes
9	33	27	8	Yes
10	31	18	0	Yes

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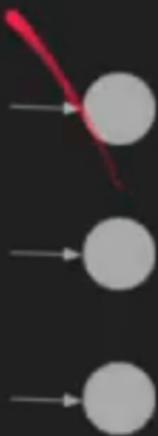
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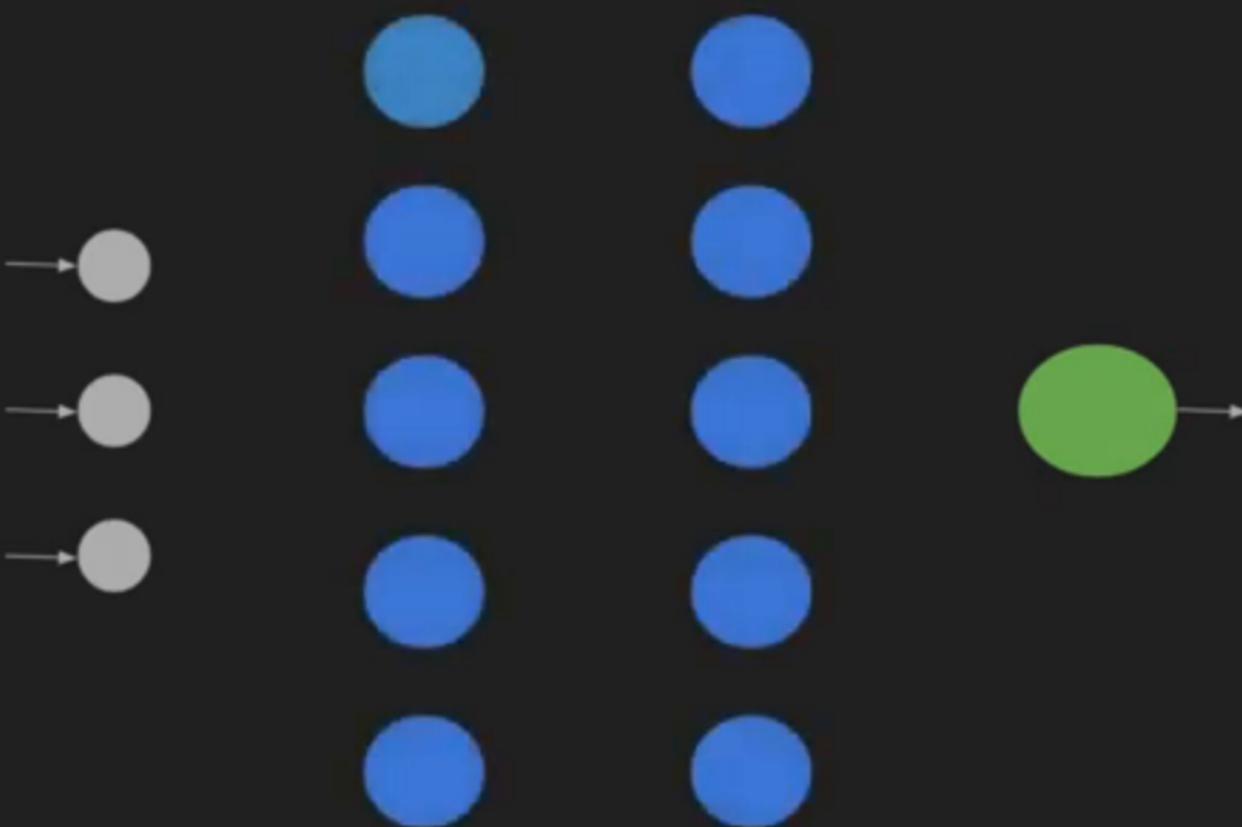
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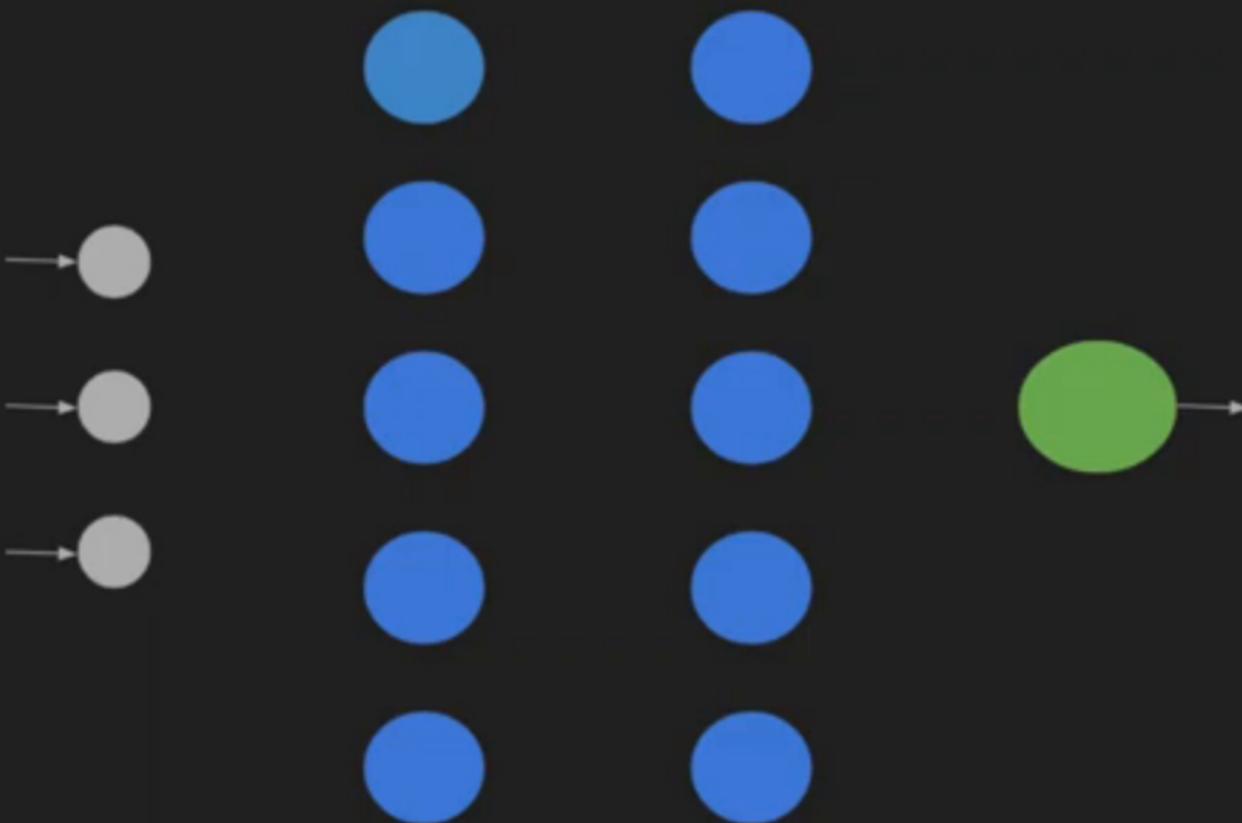
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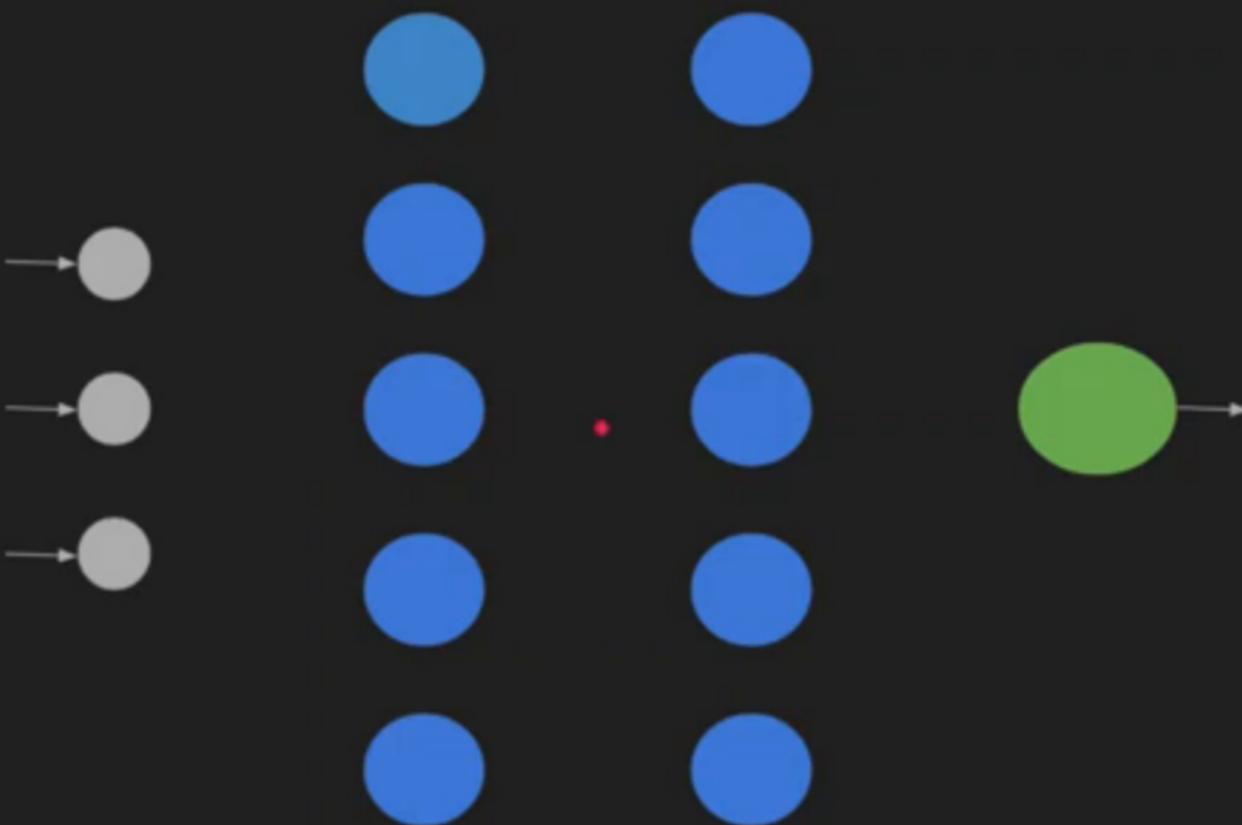
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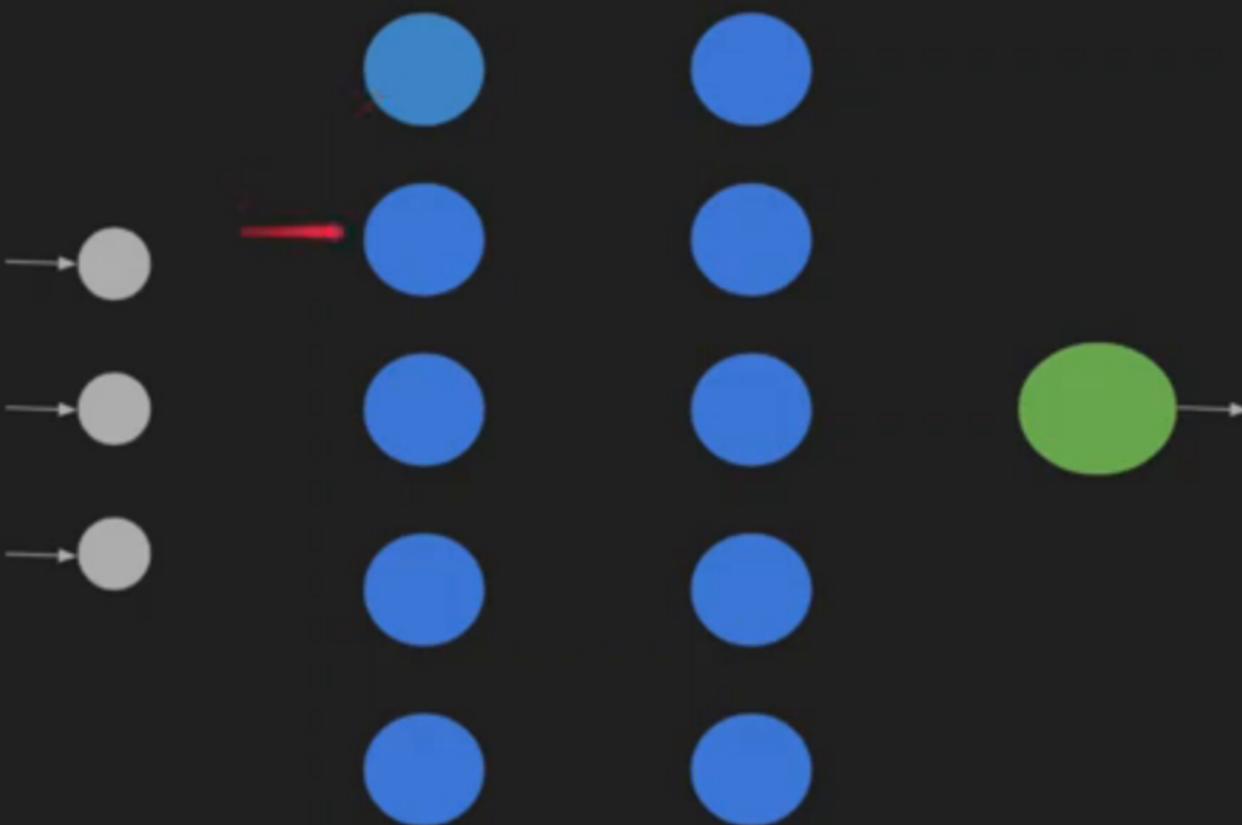
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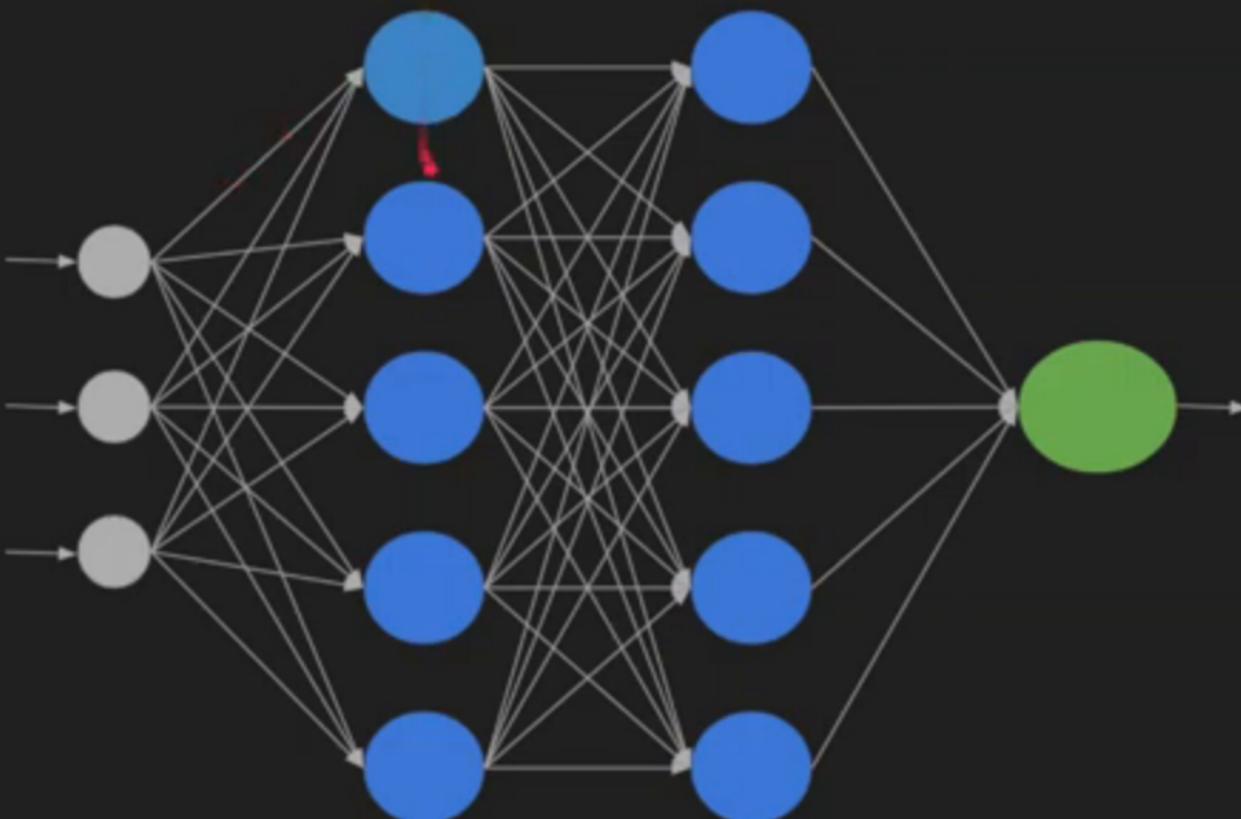
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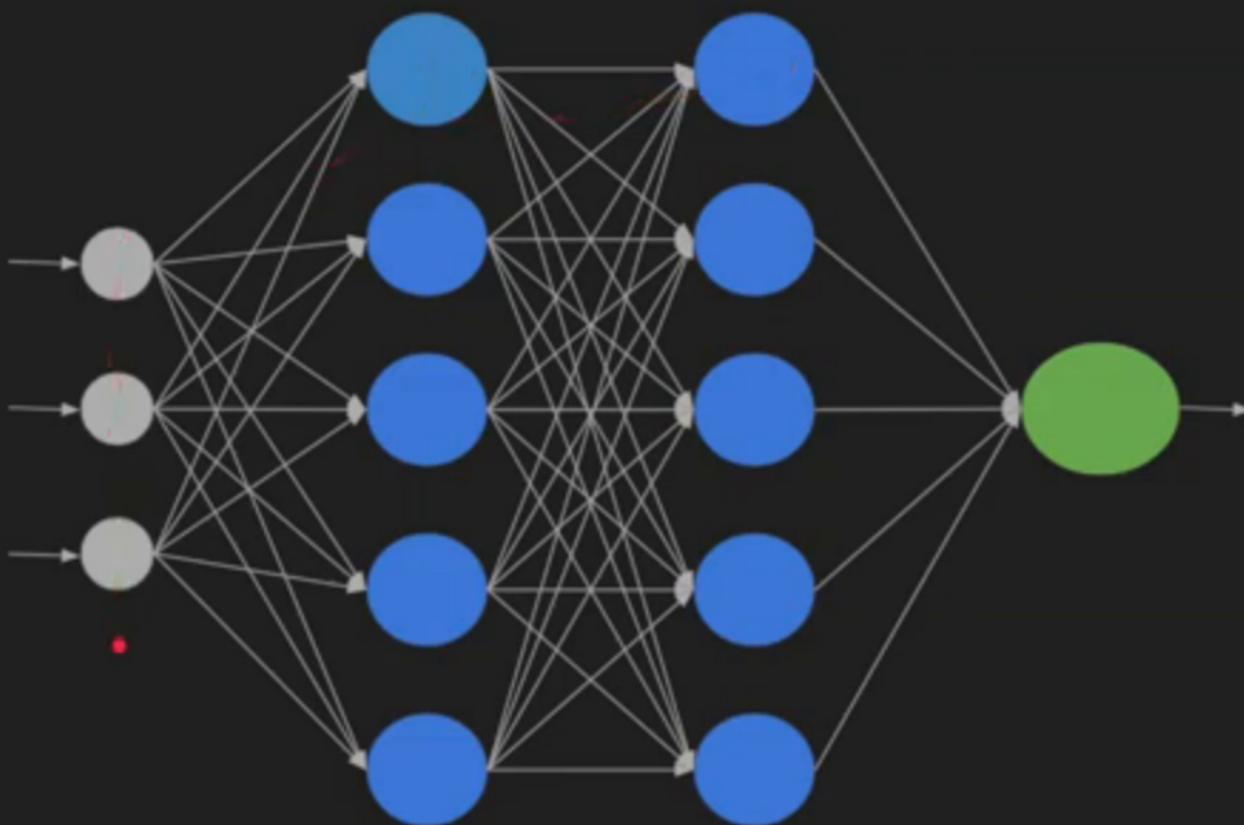
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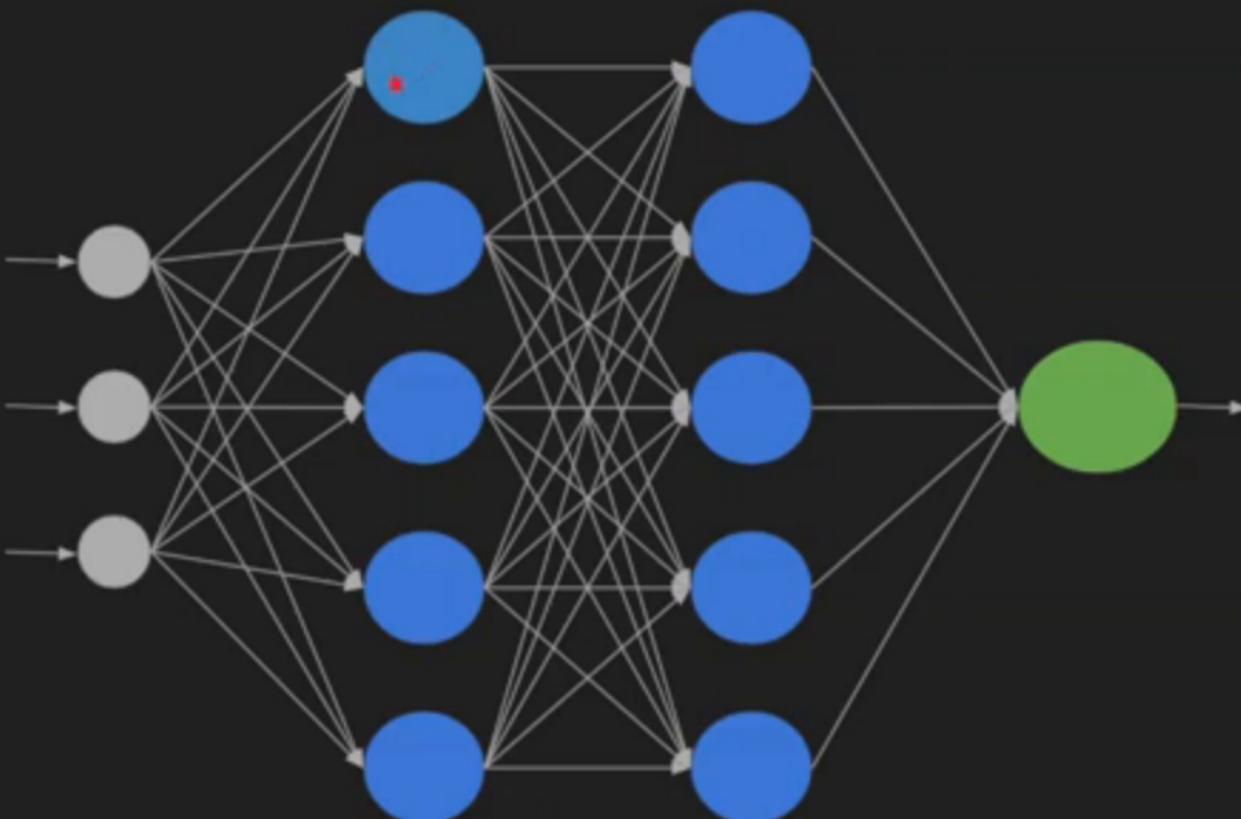
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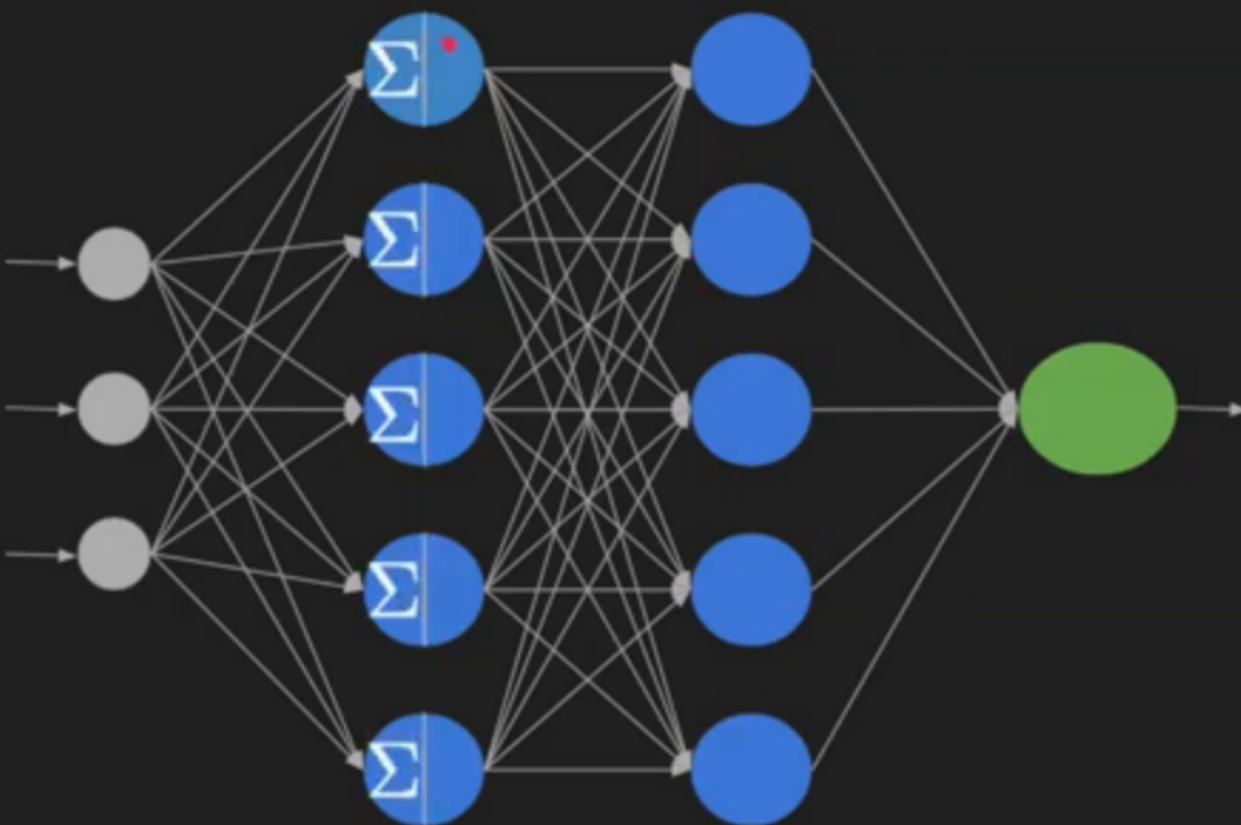
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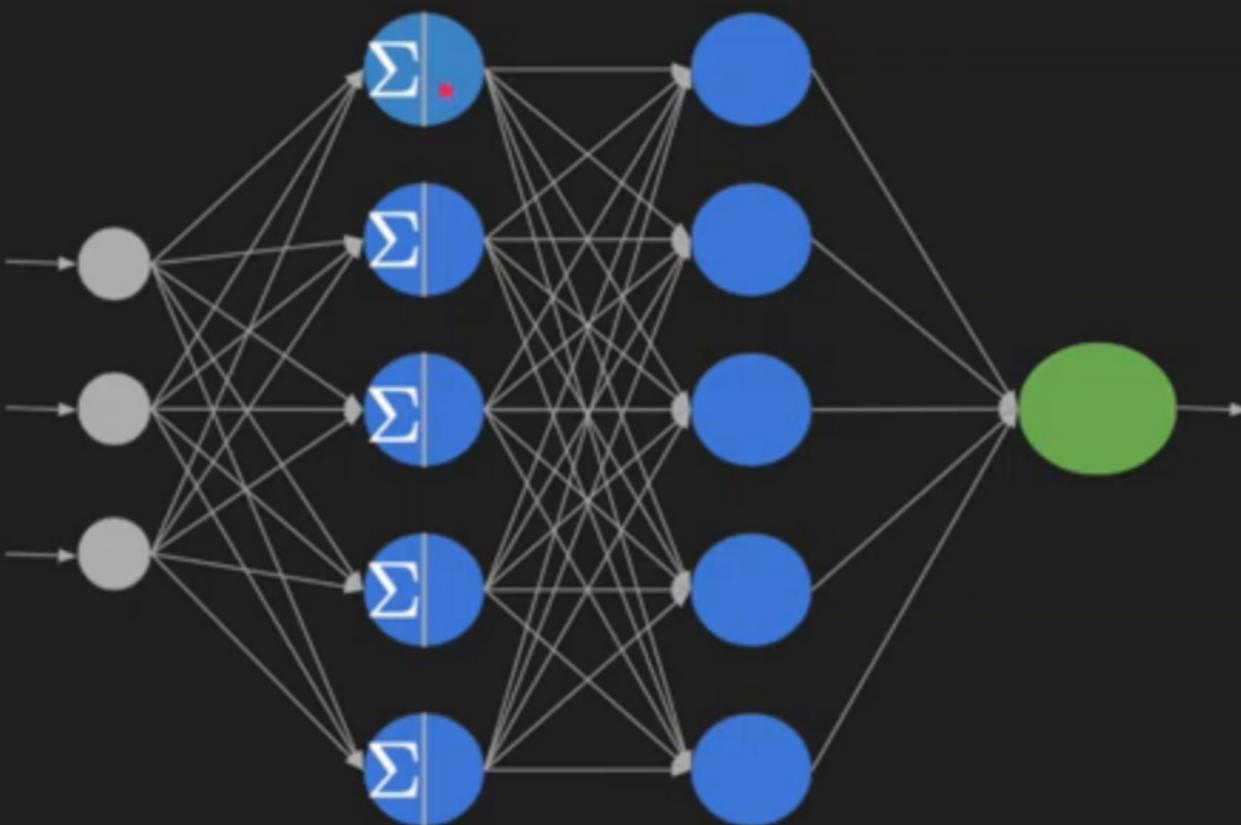
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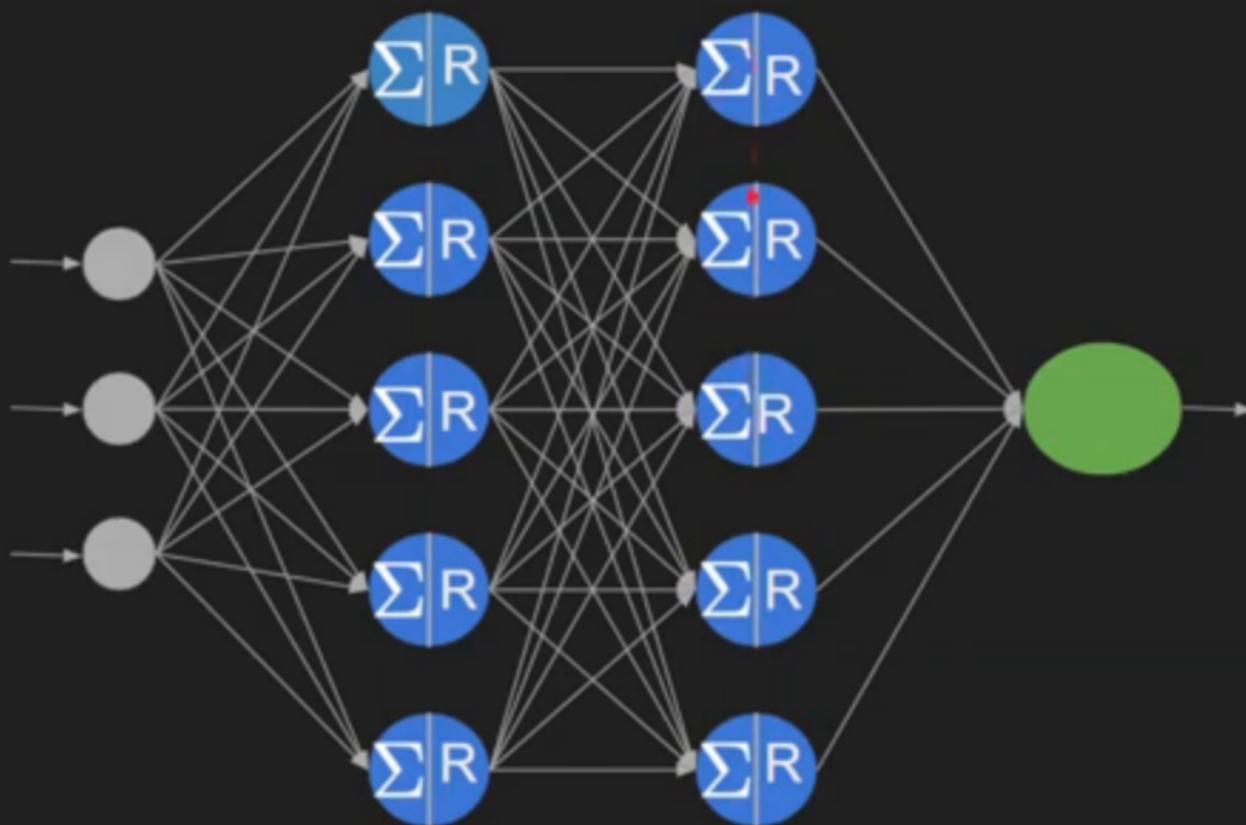
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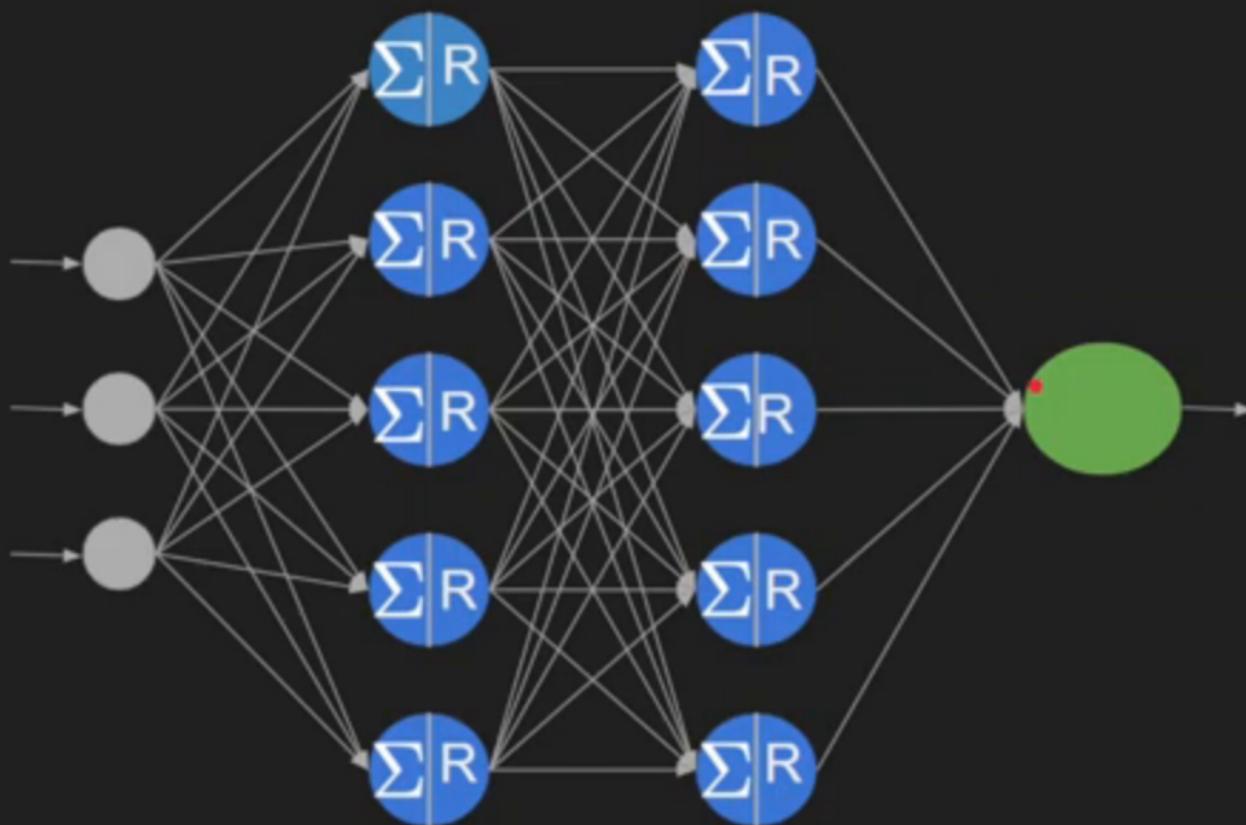
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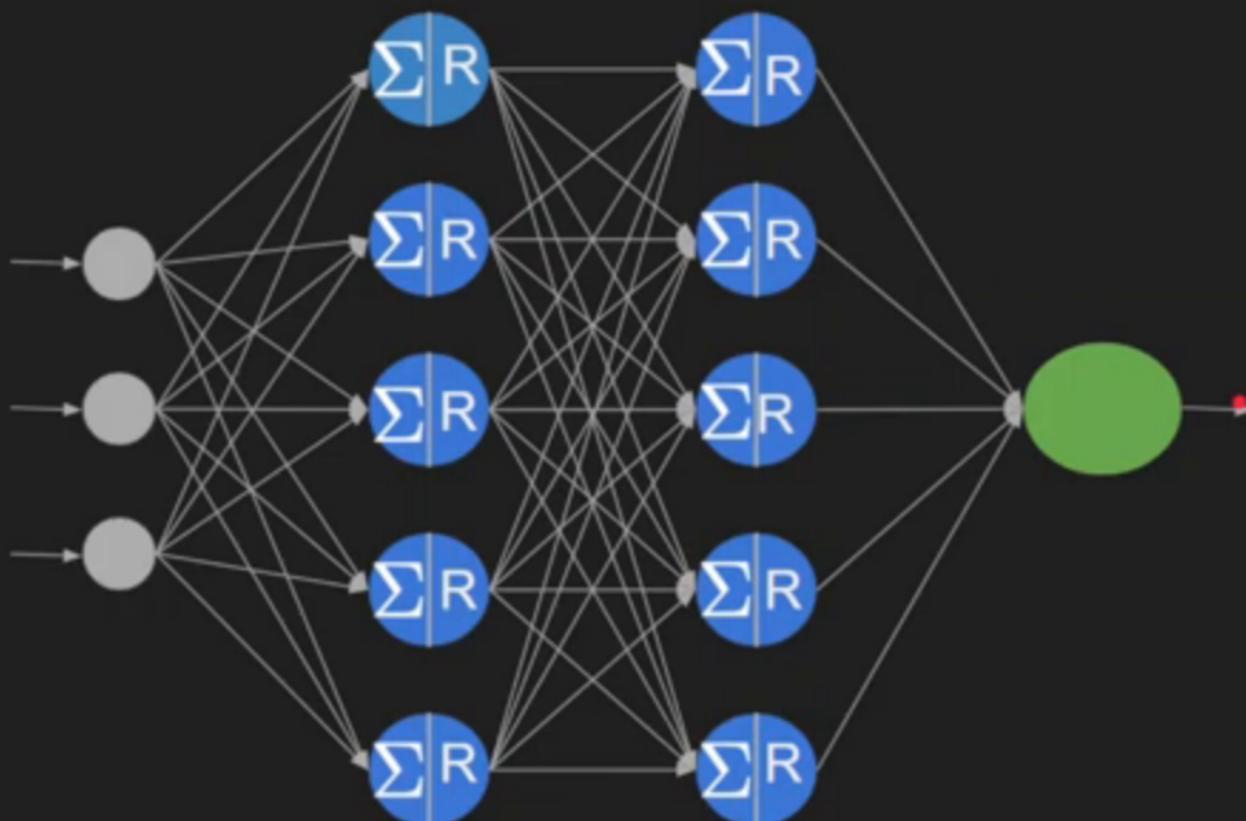
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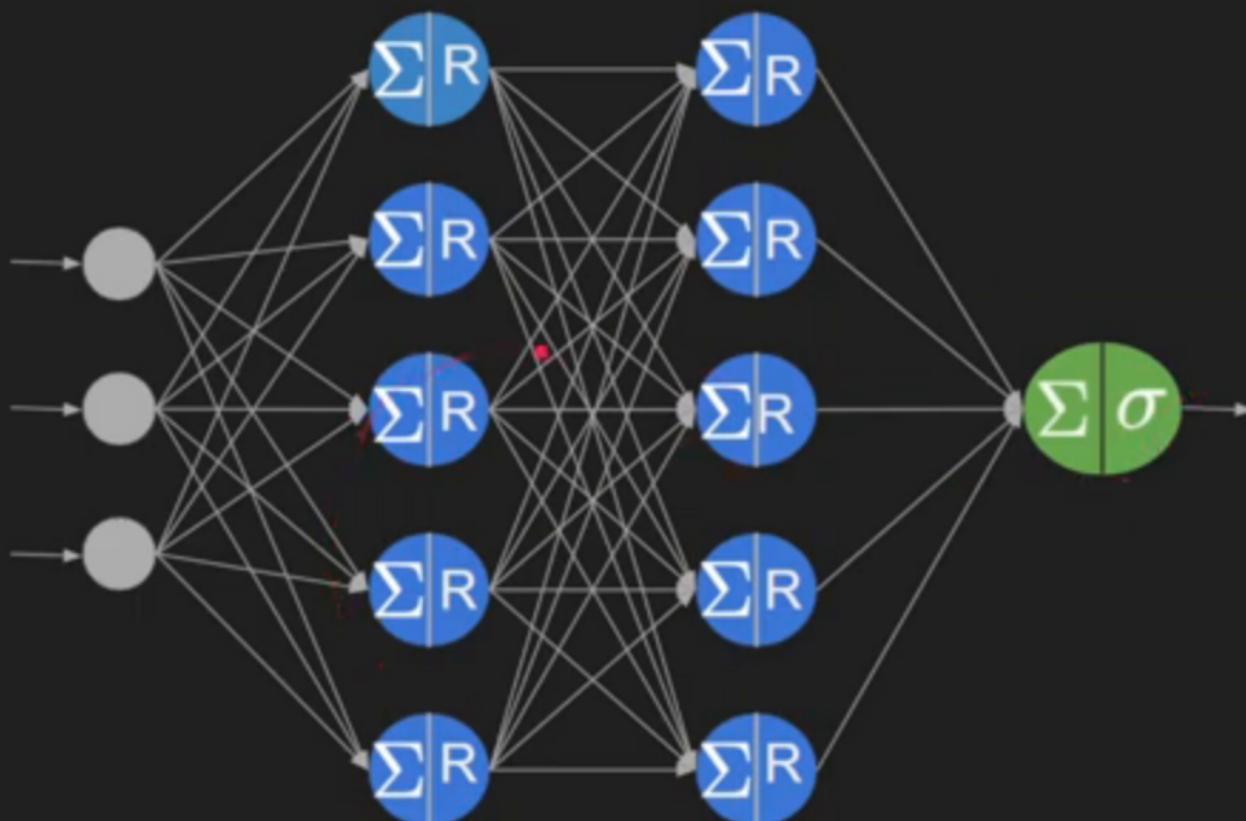
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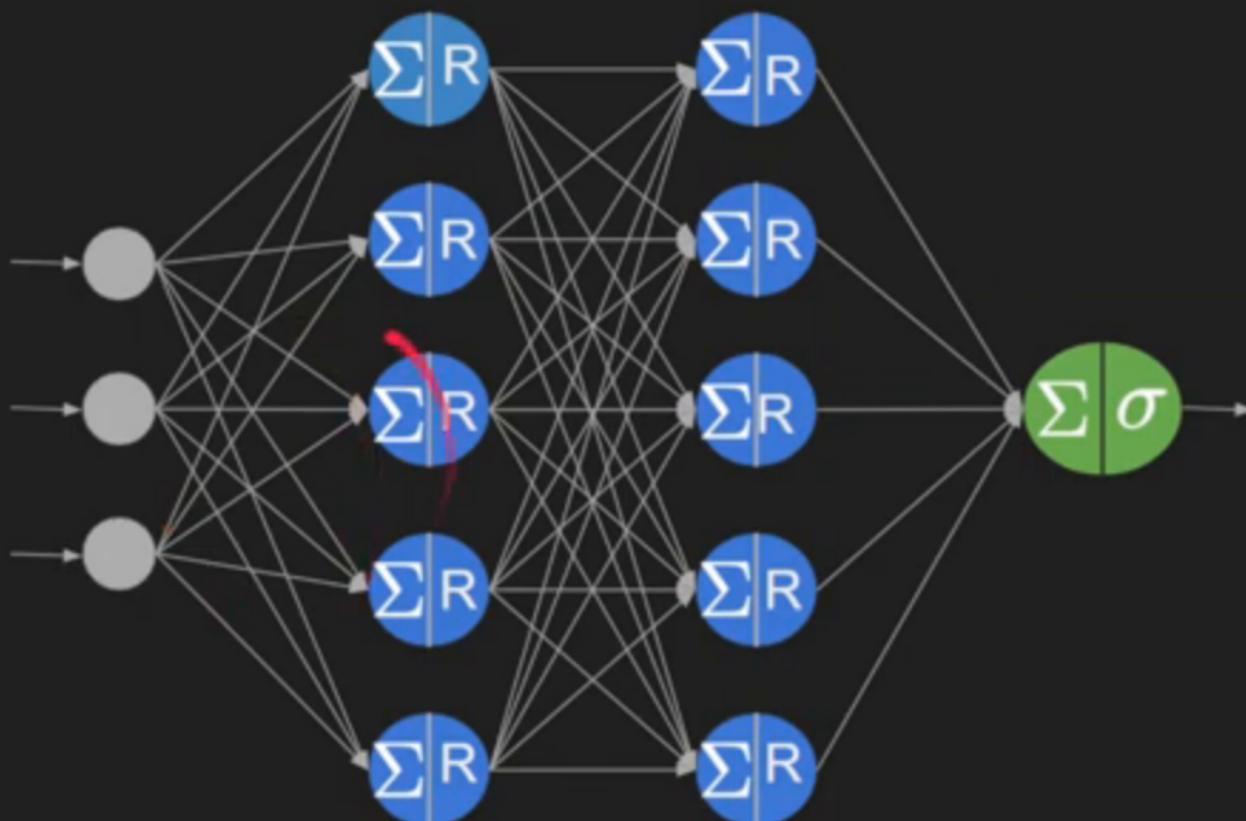
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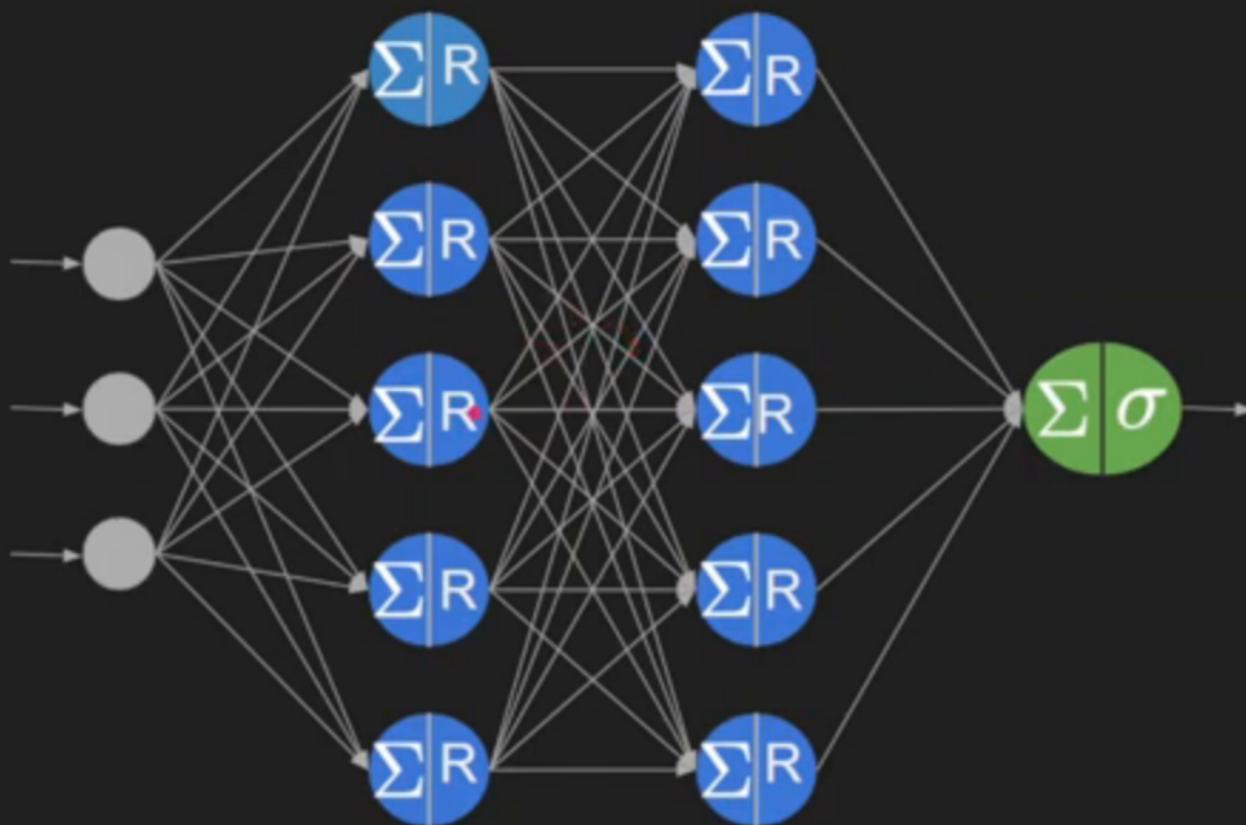
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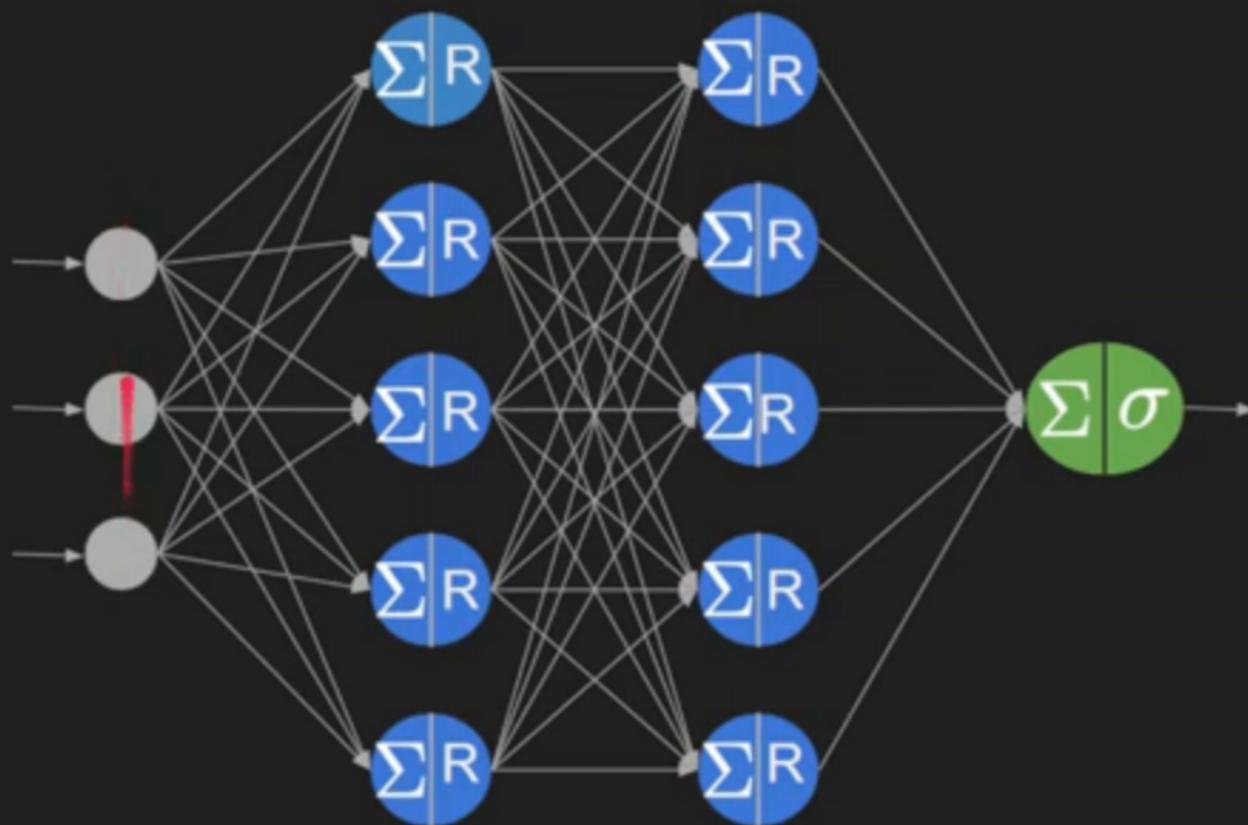
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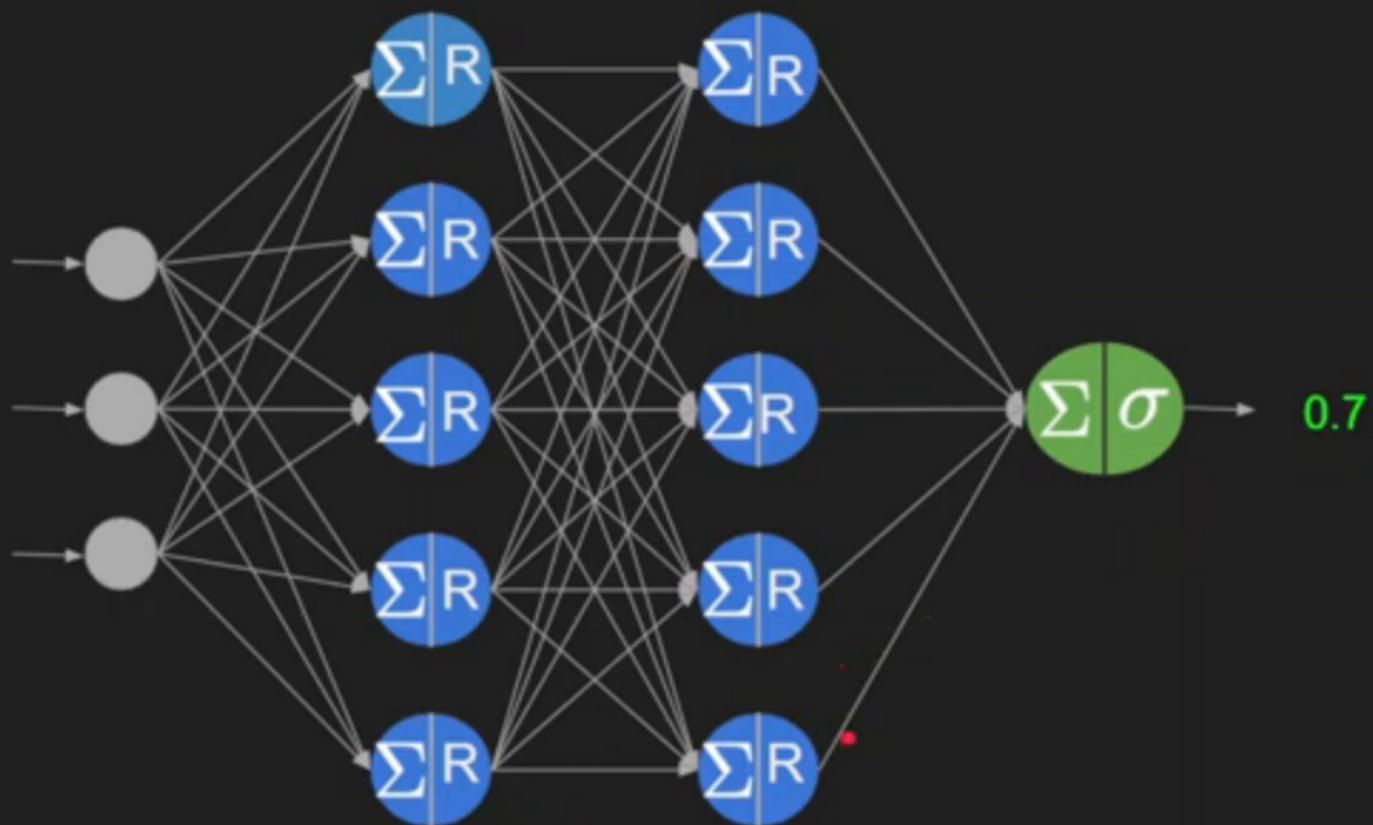
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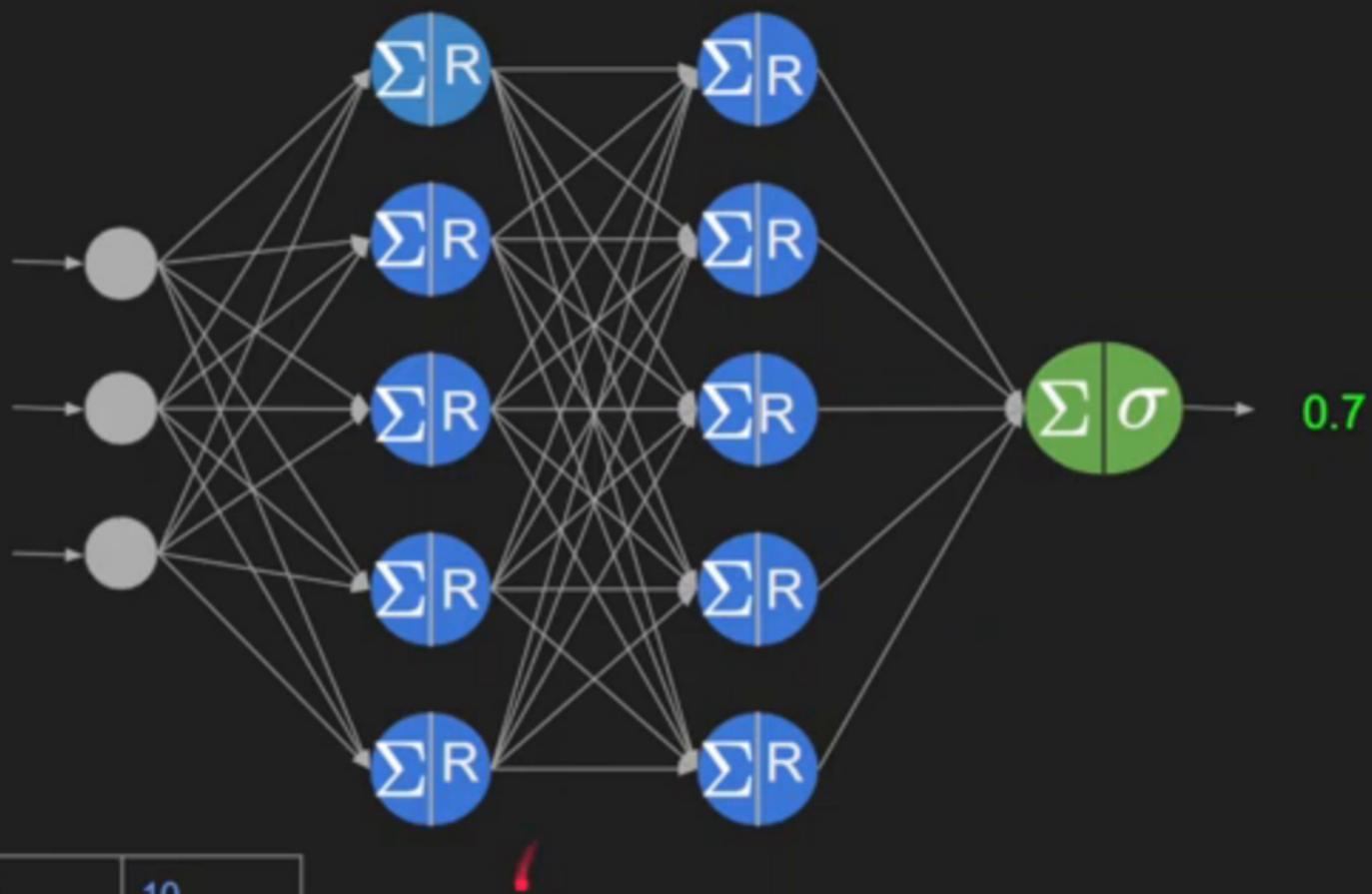
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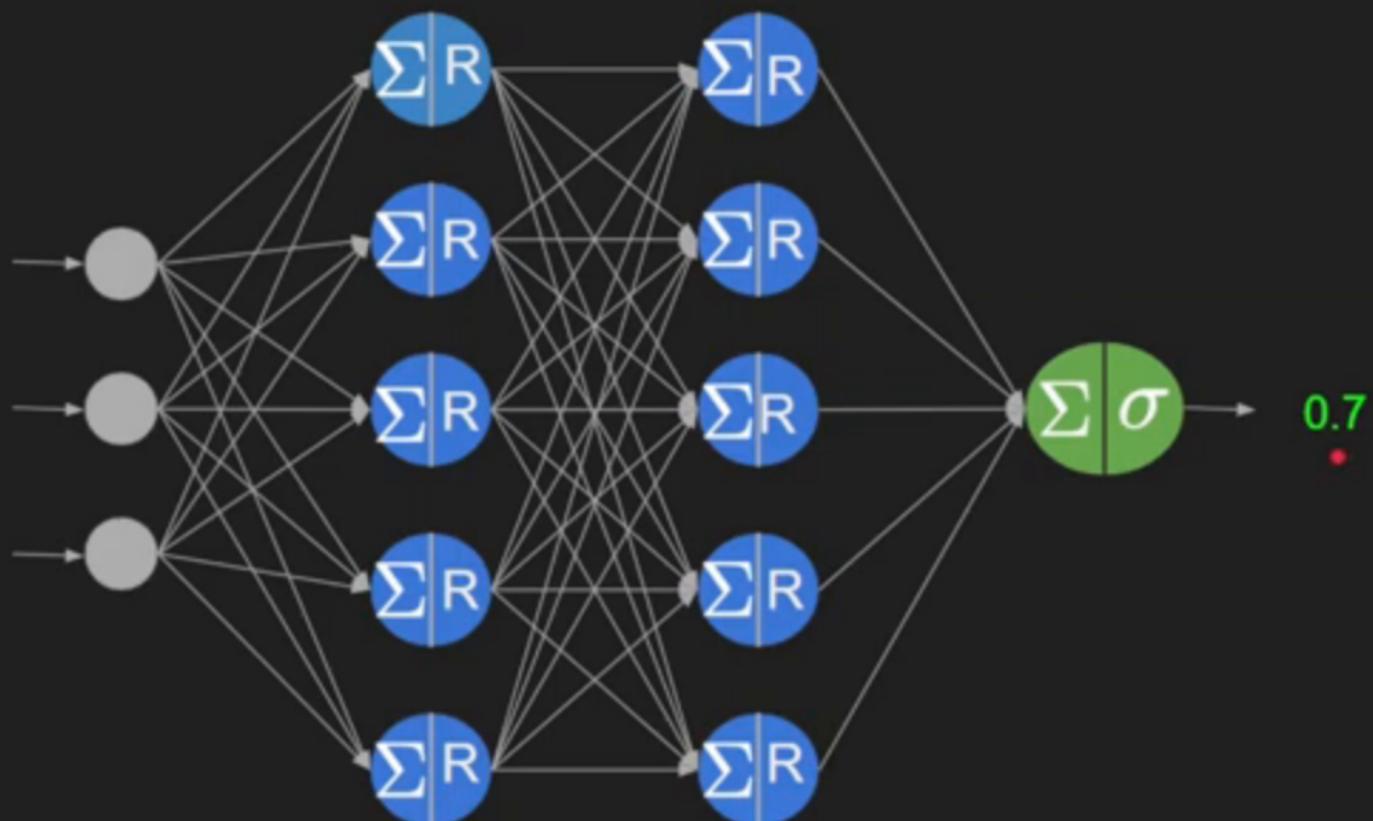
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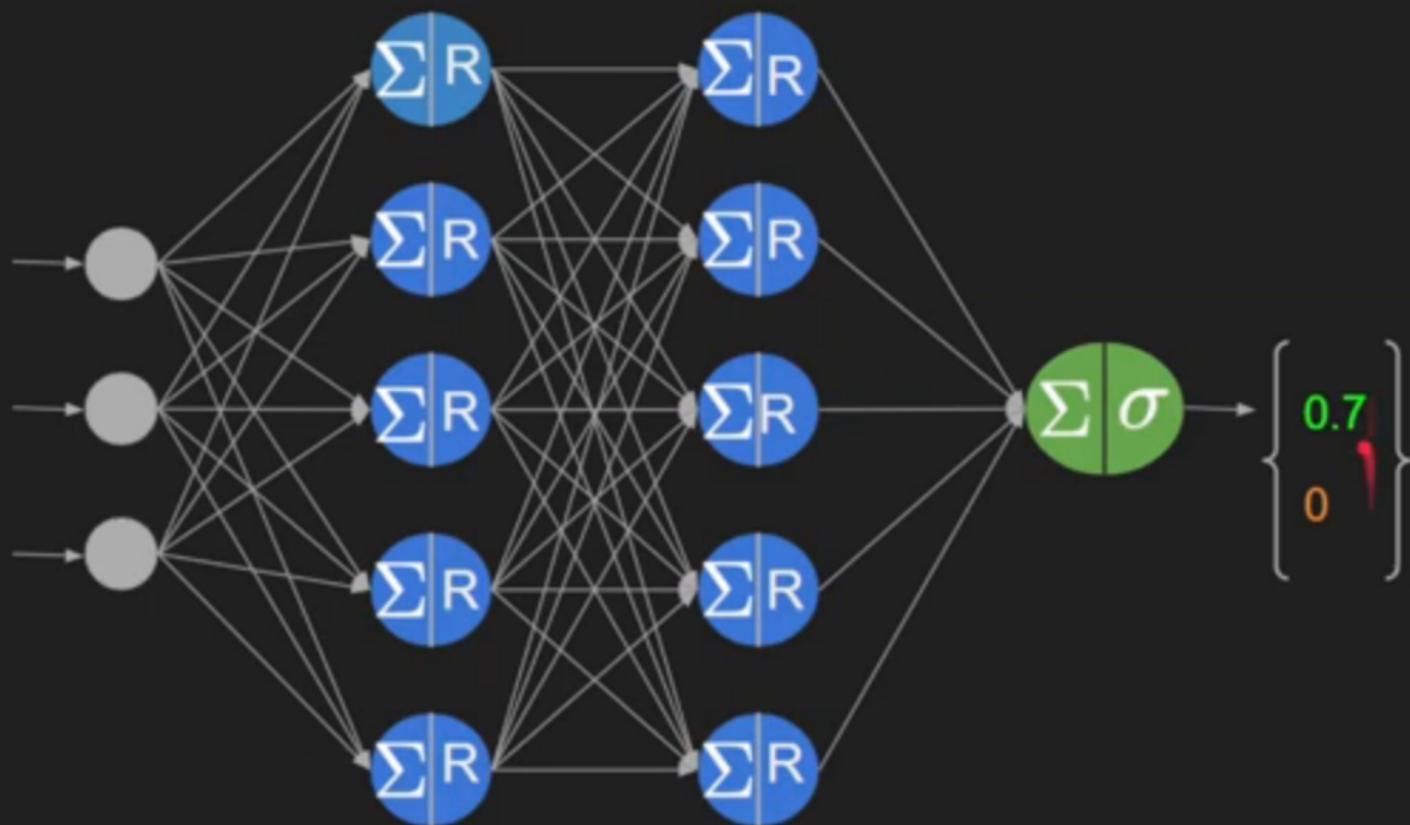
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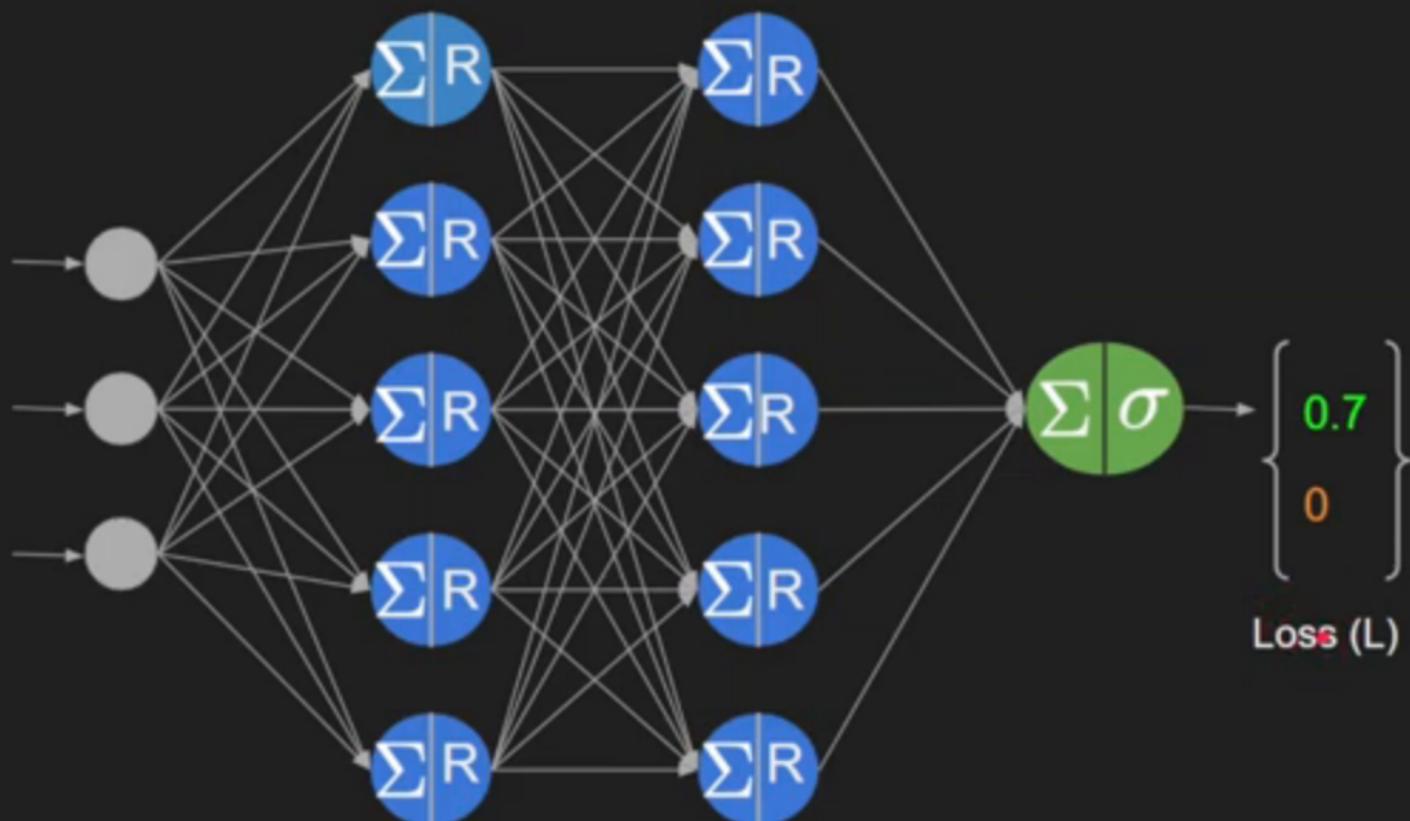
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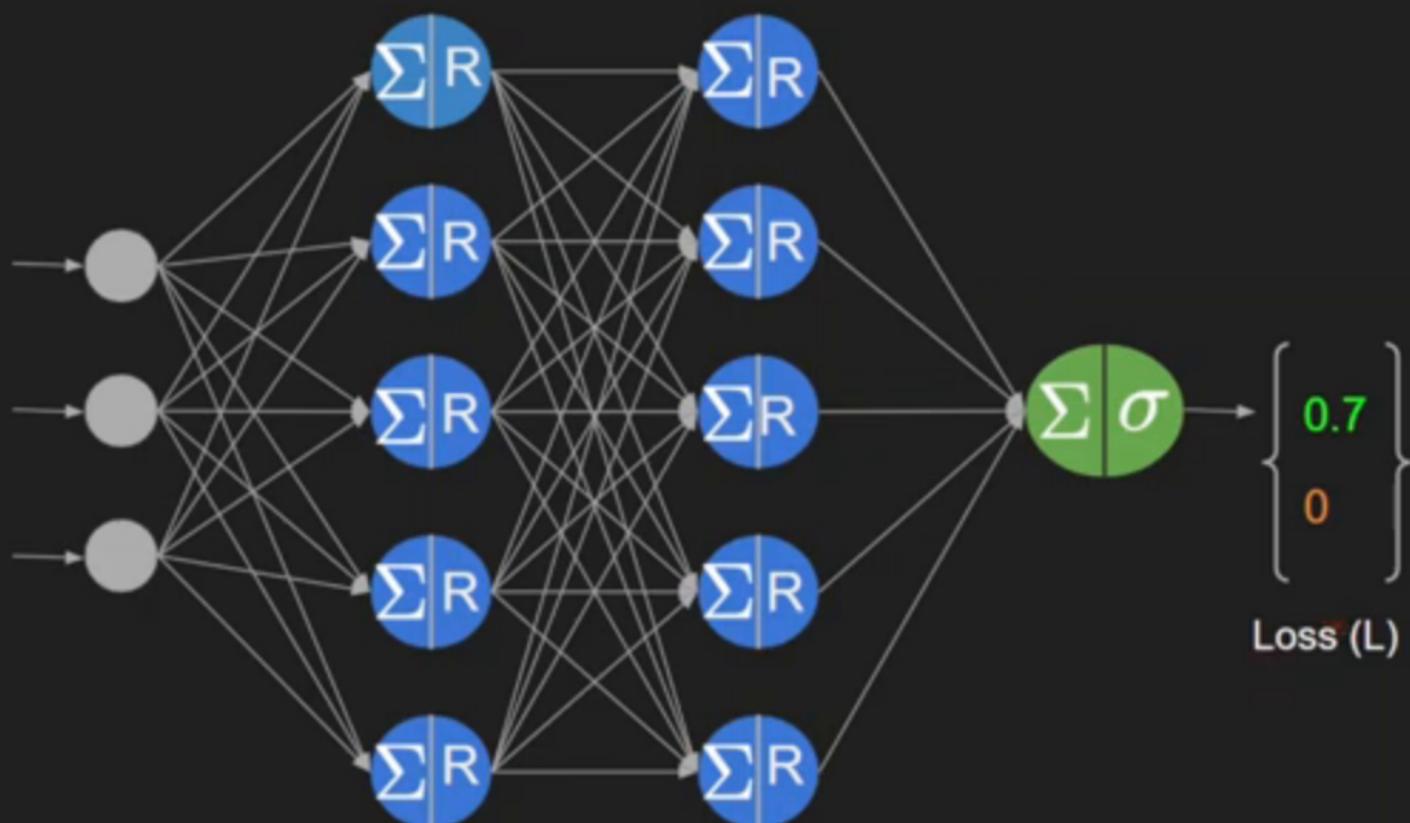
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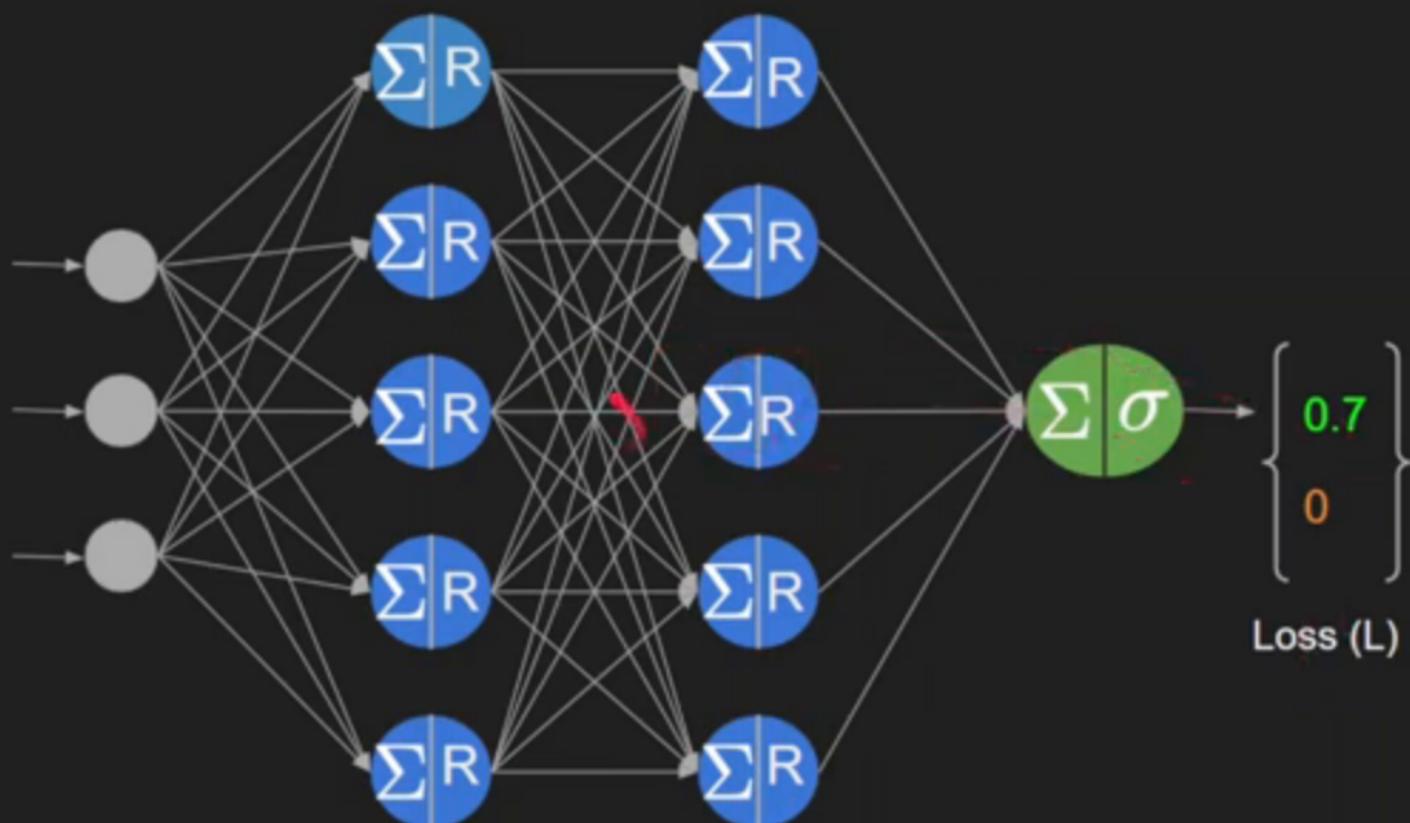
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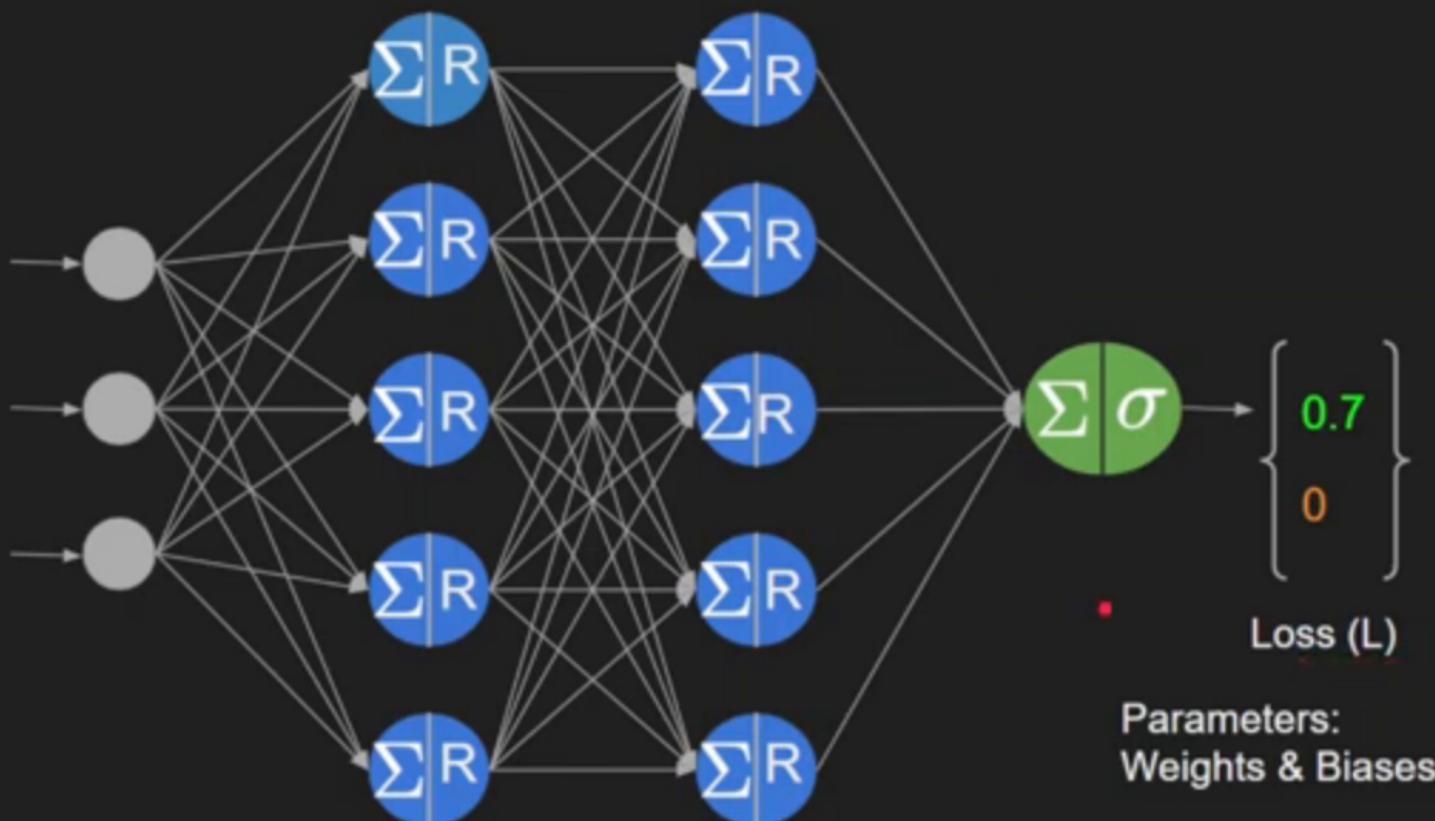
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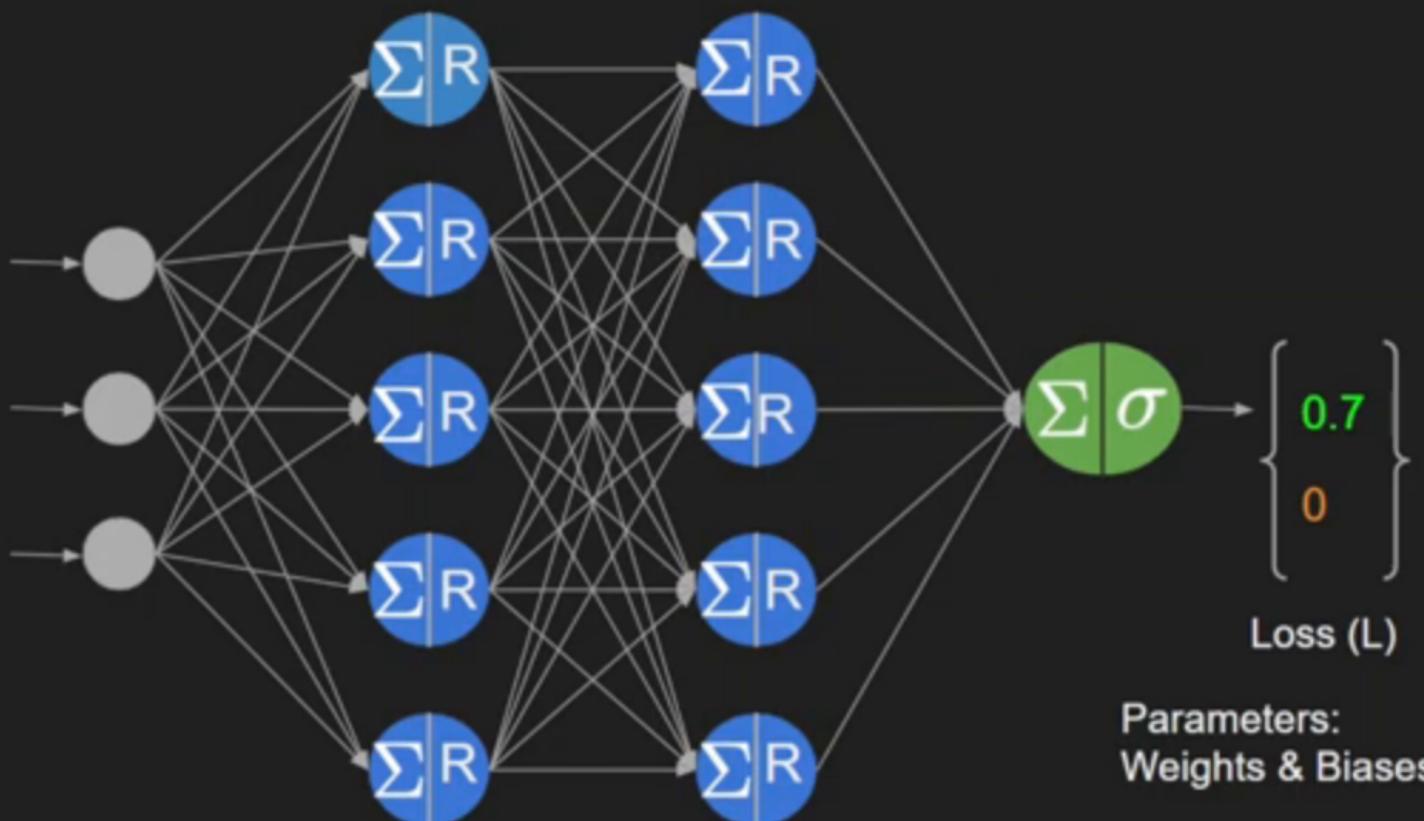
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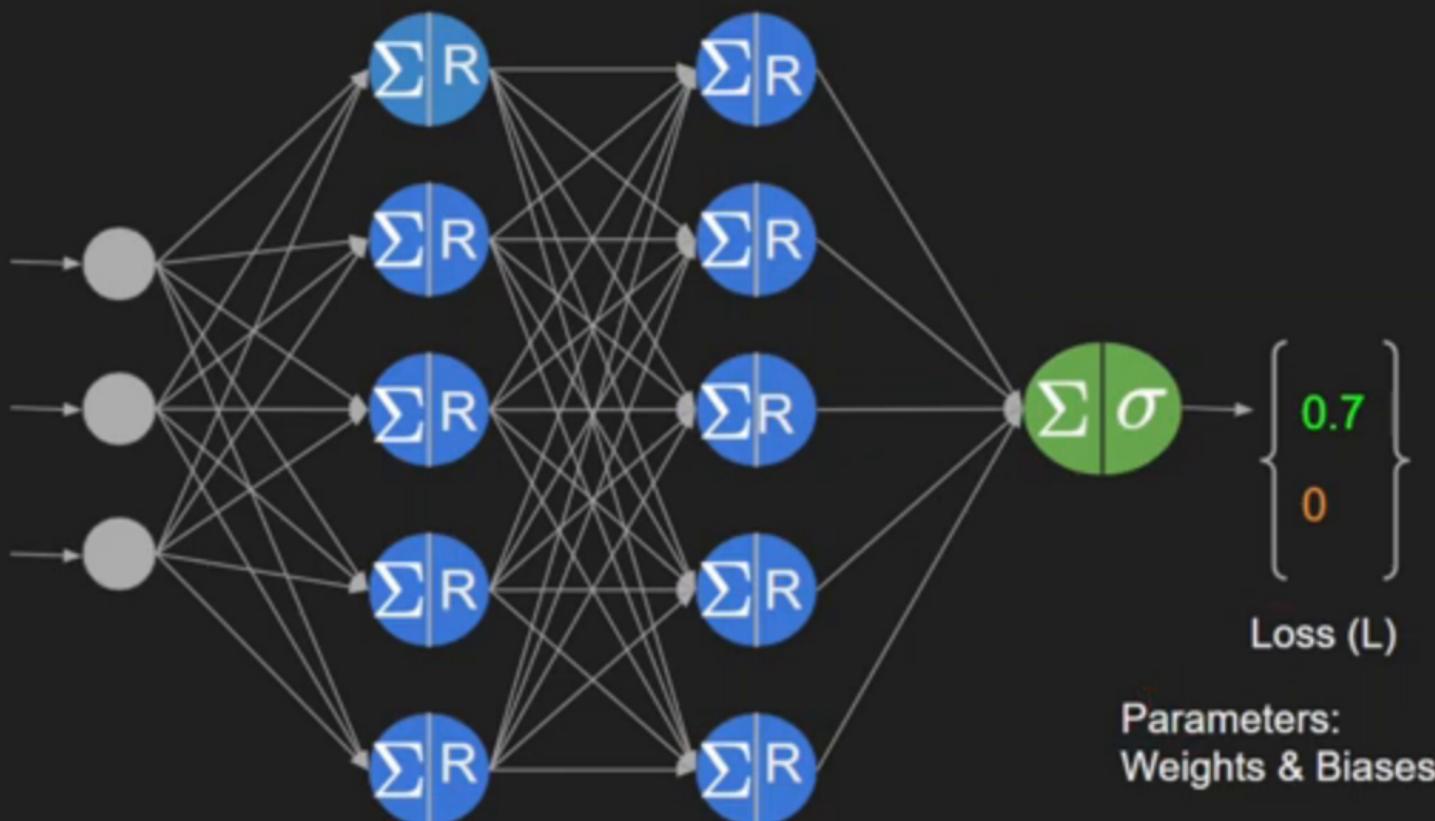
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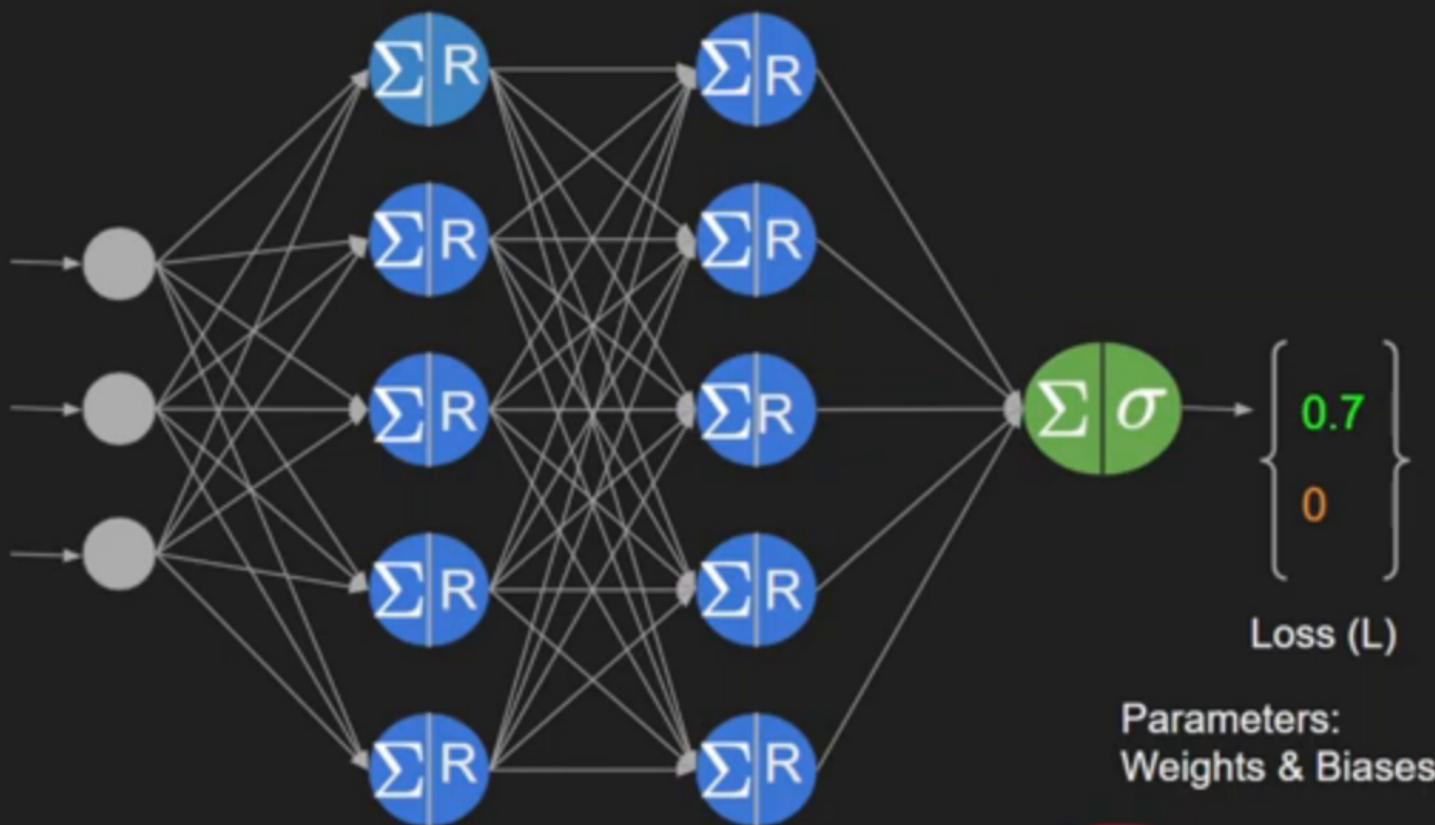


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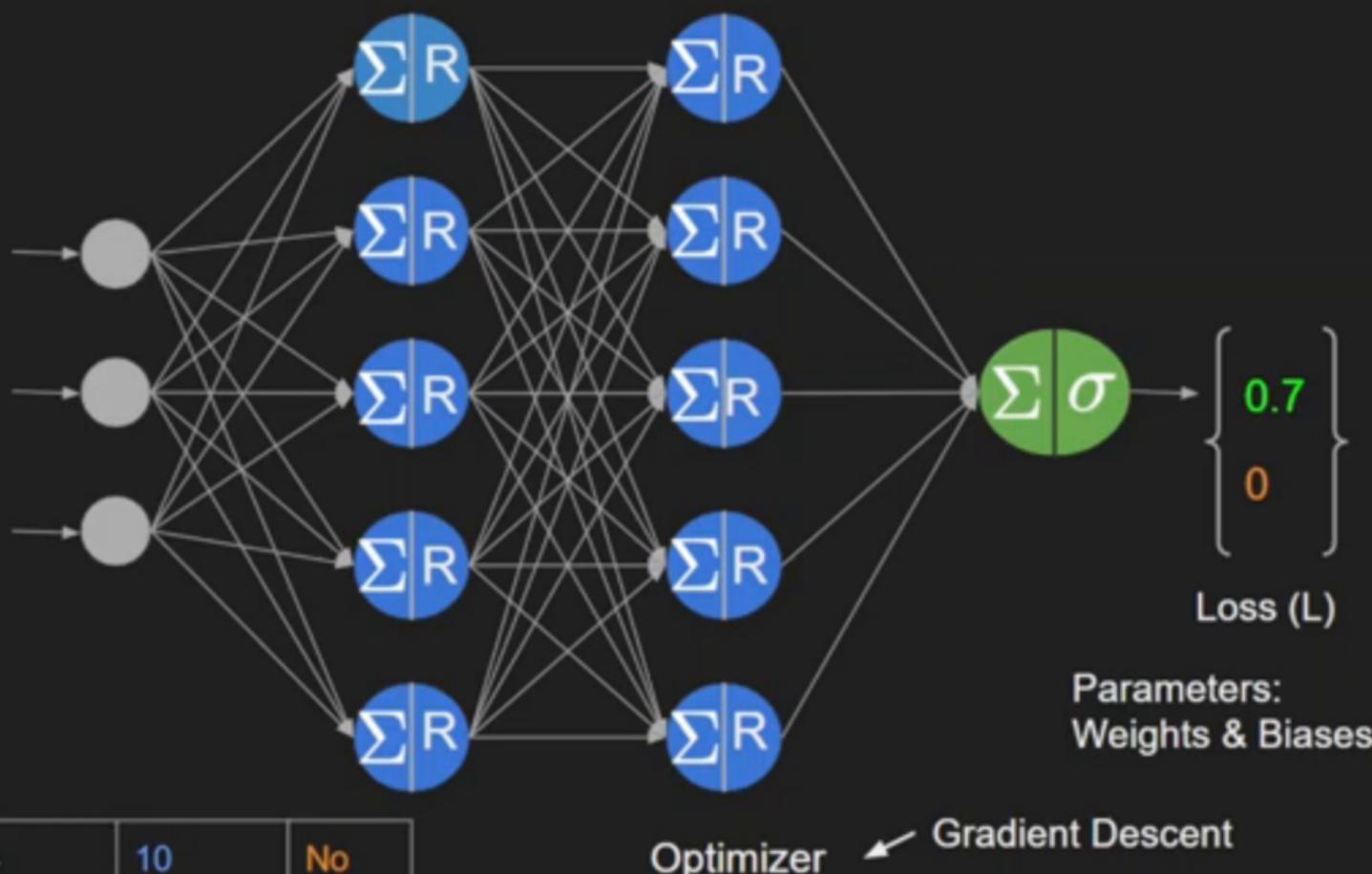
Gradient Descent

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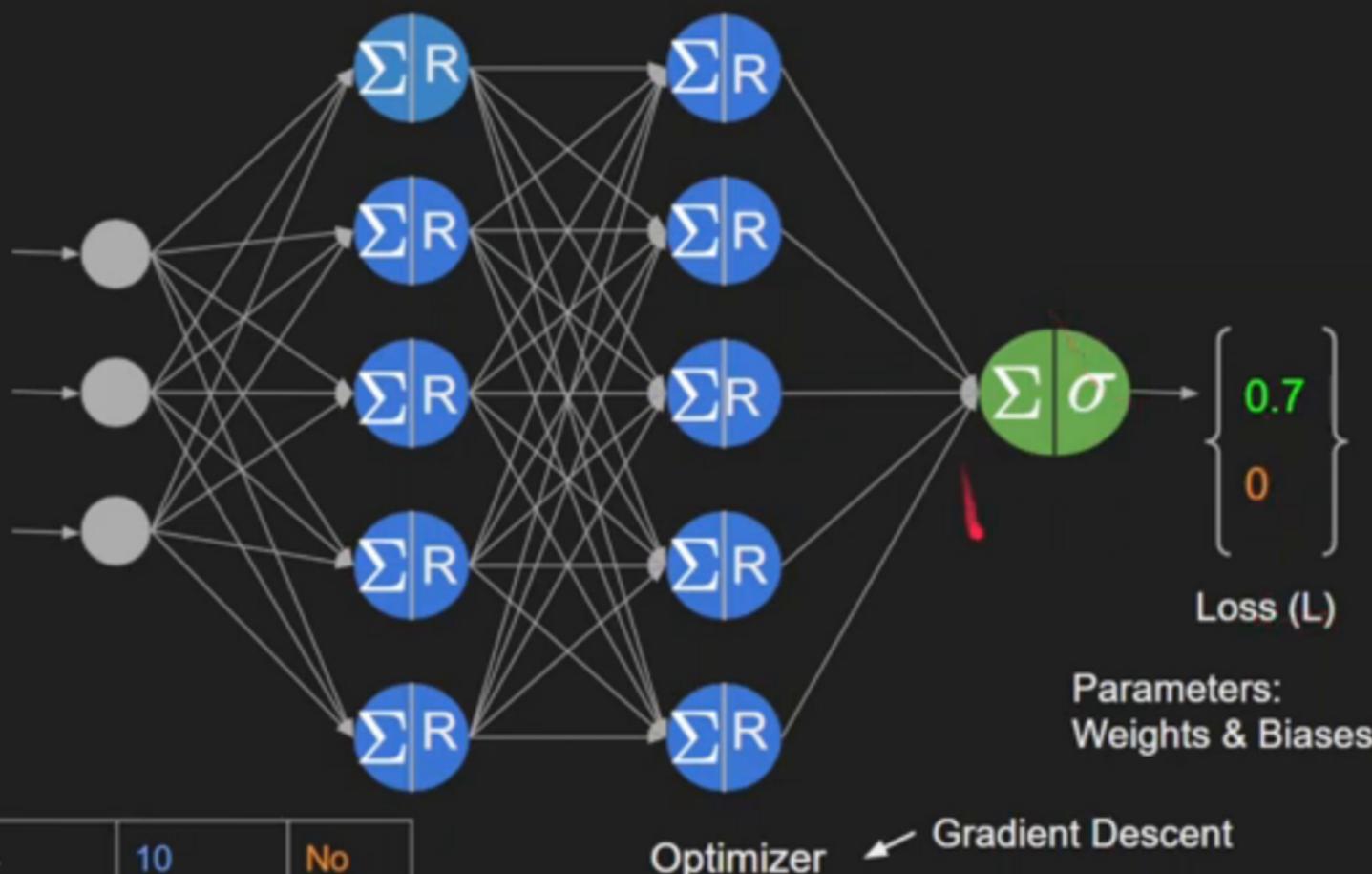


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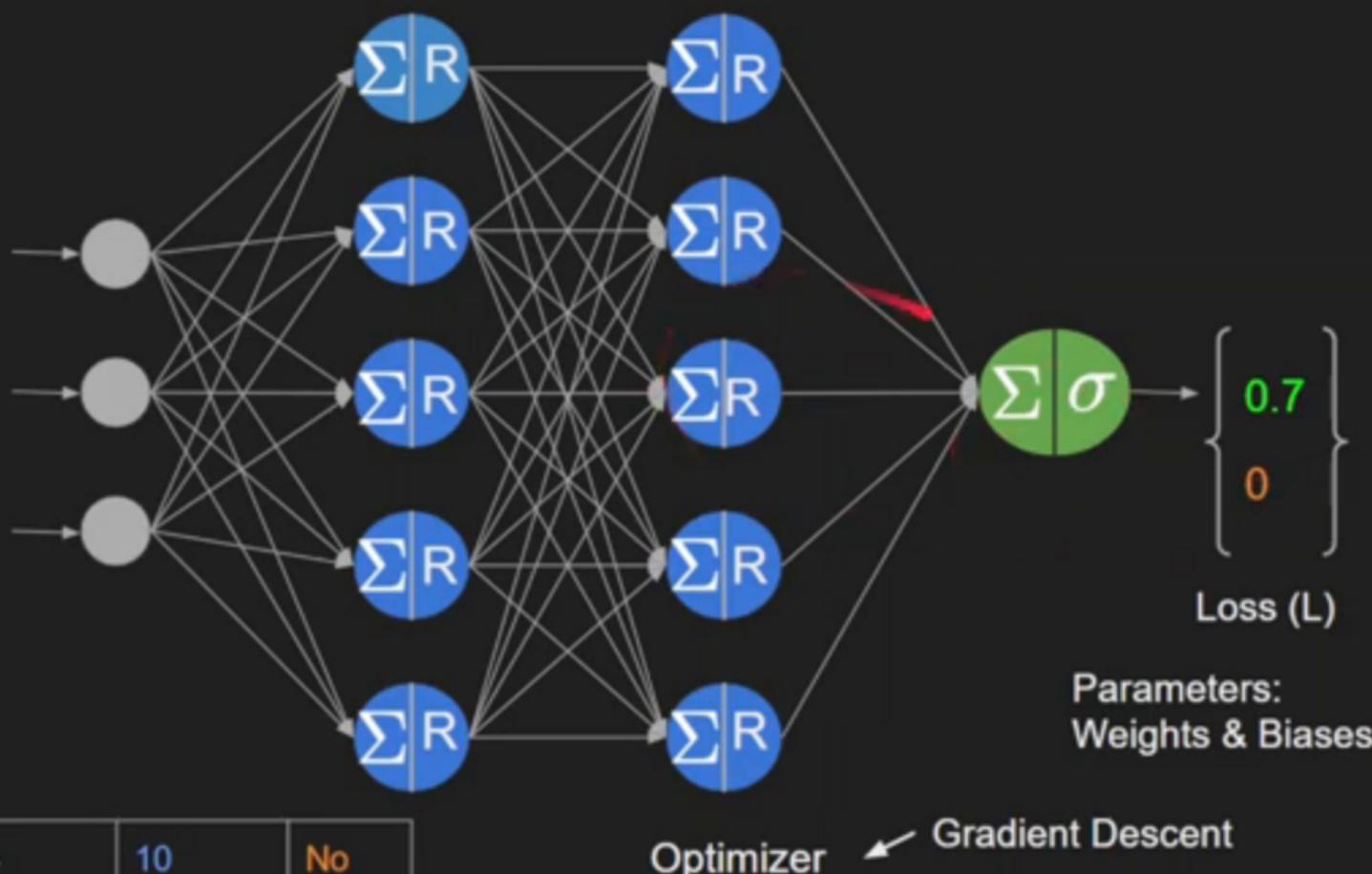
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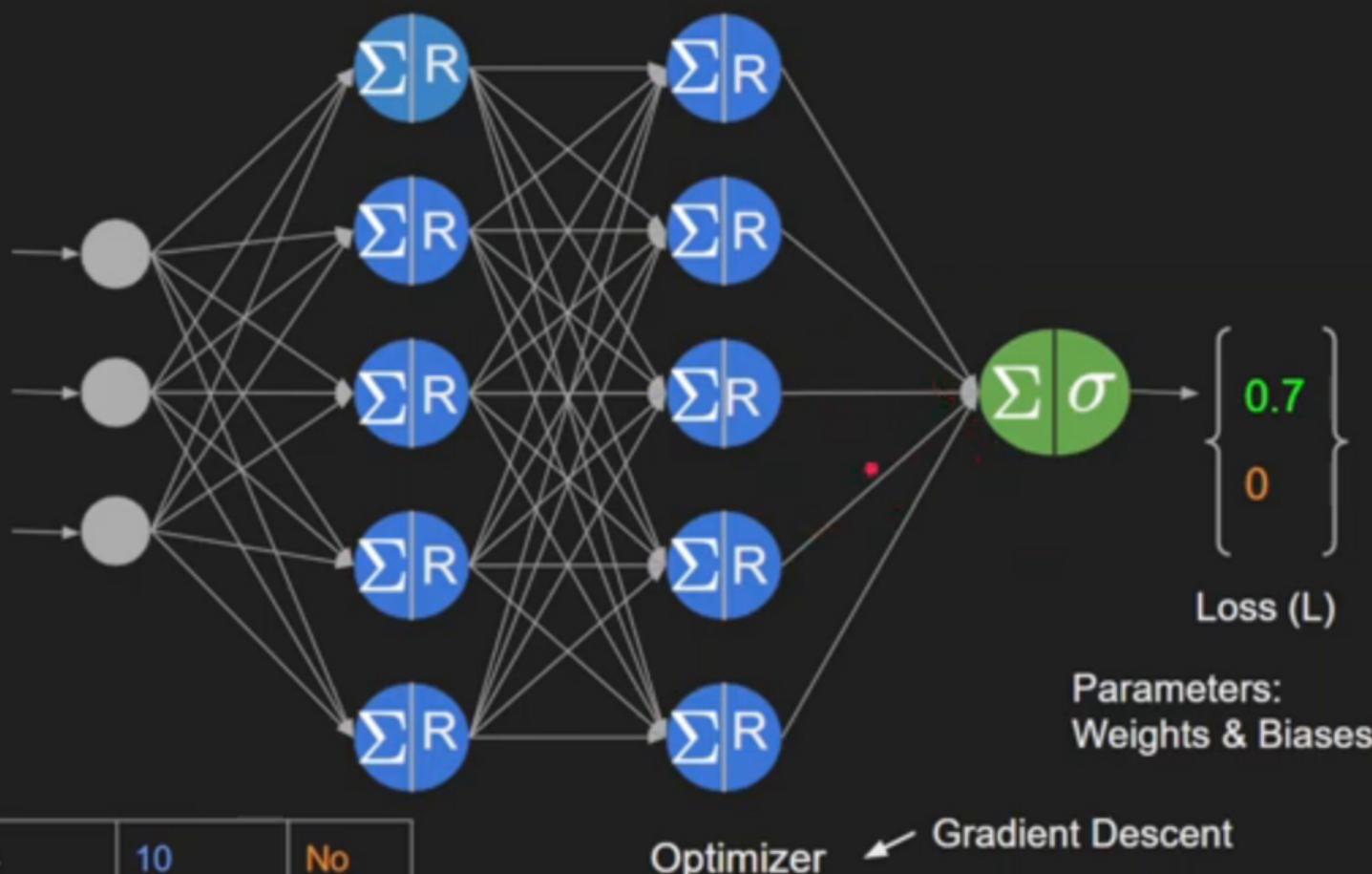
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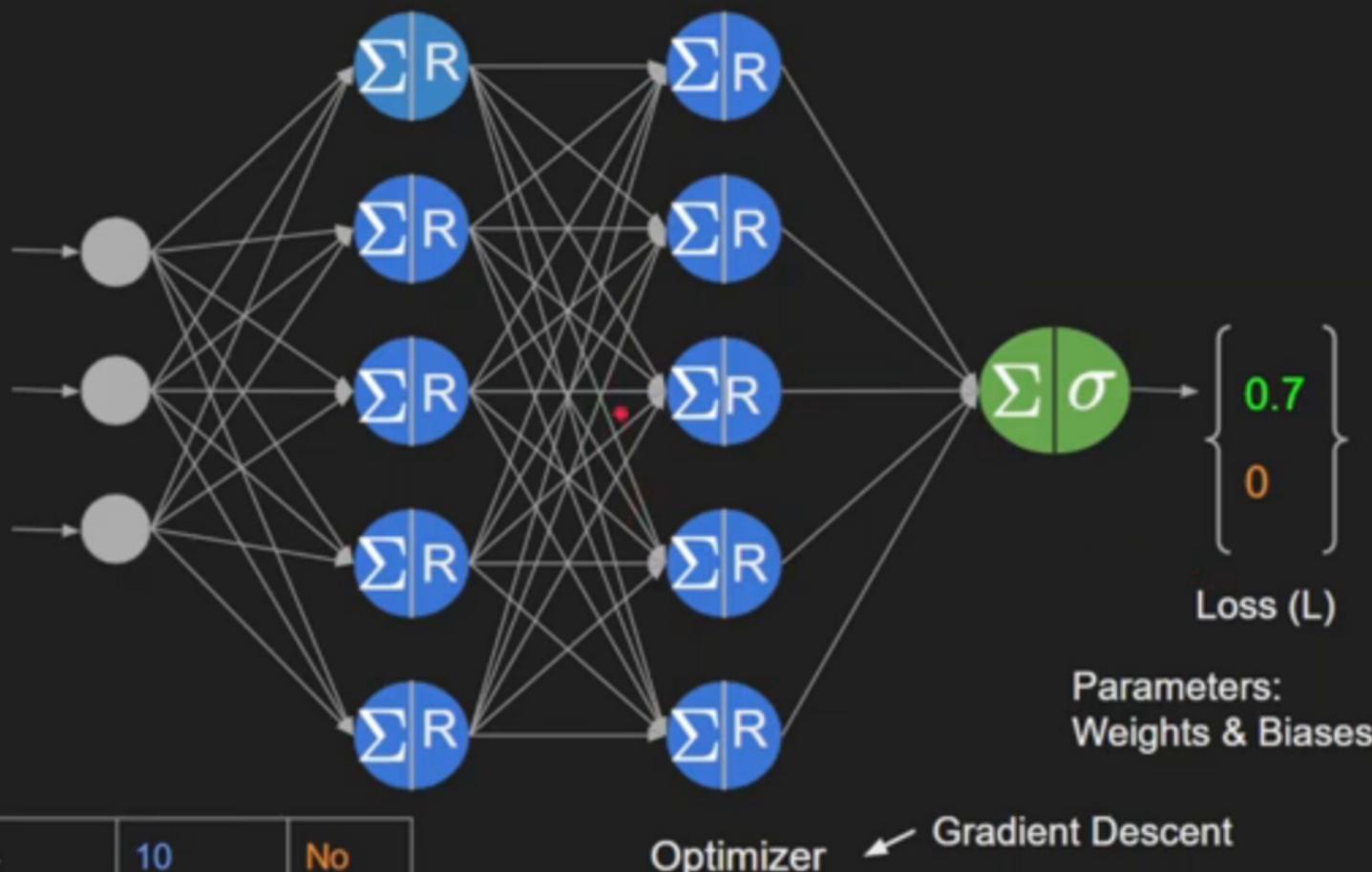
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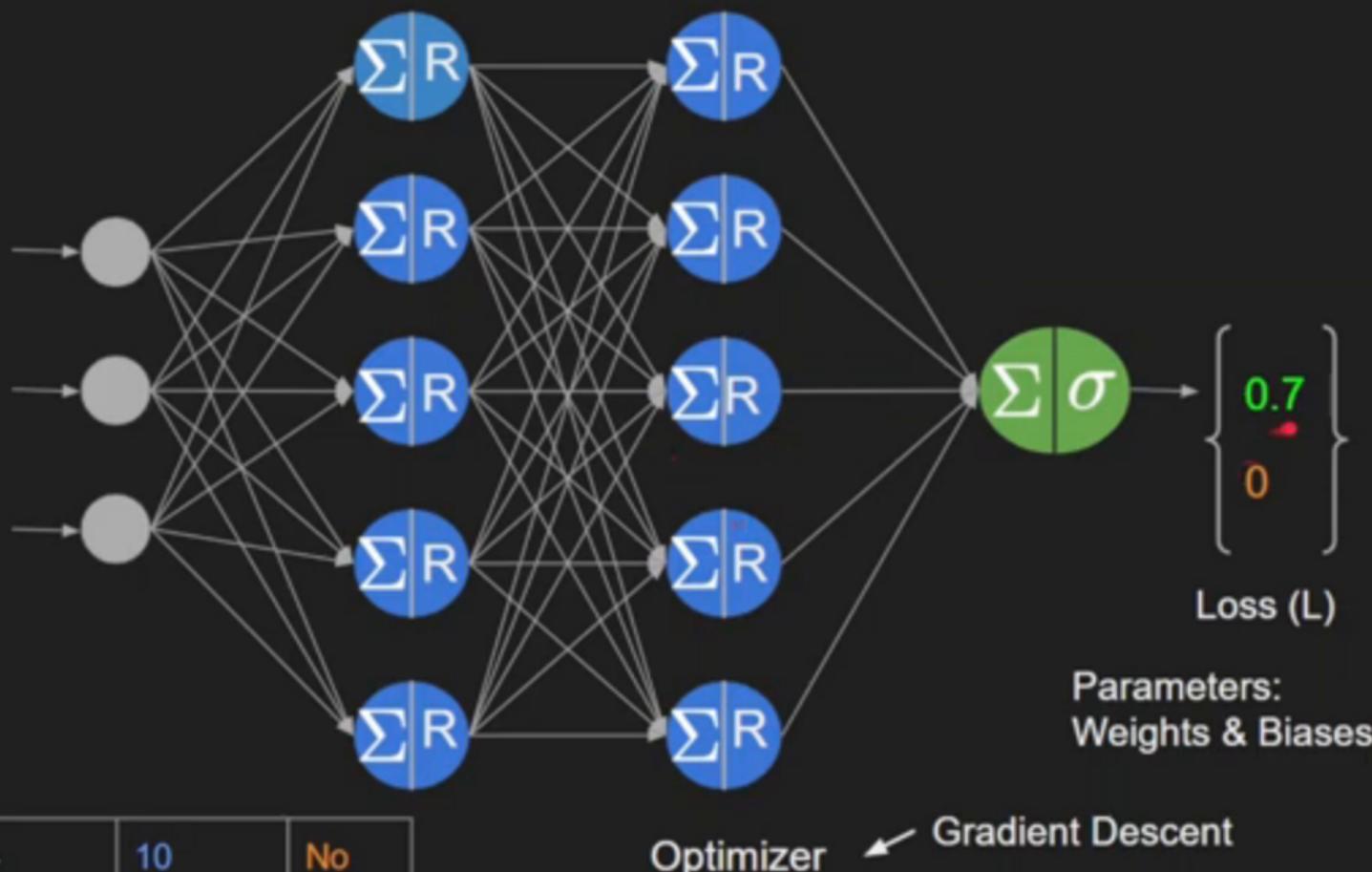
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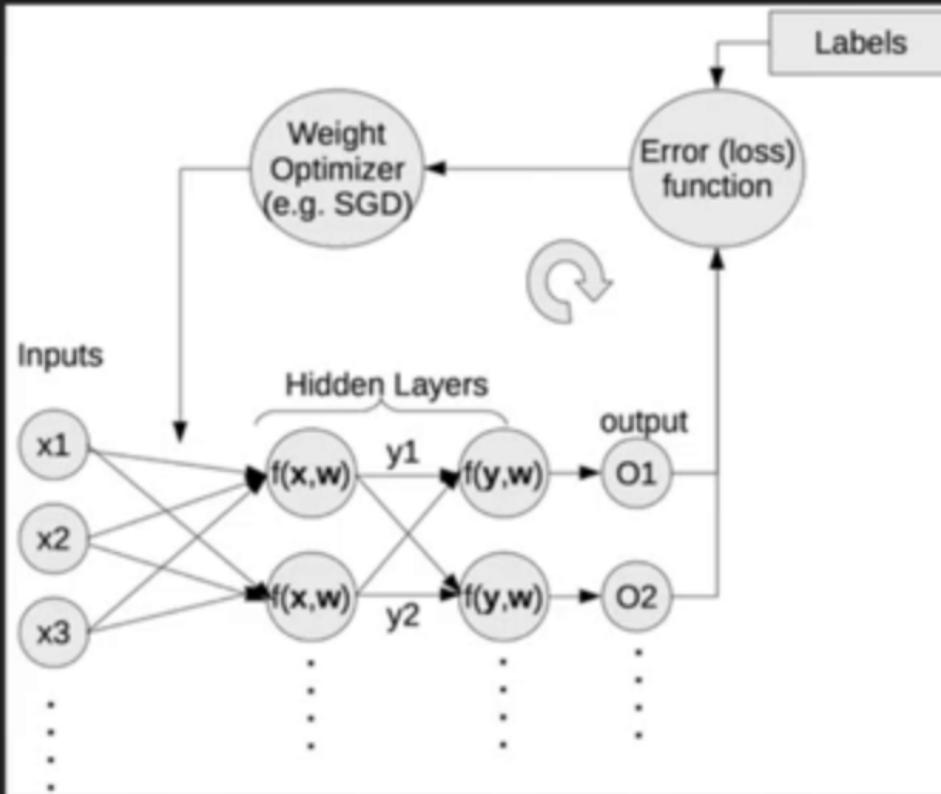


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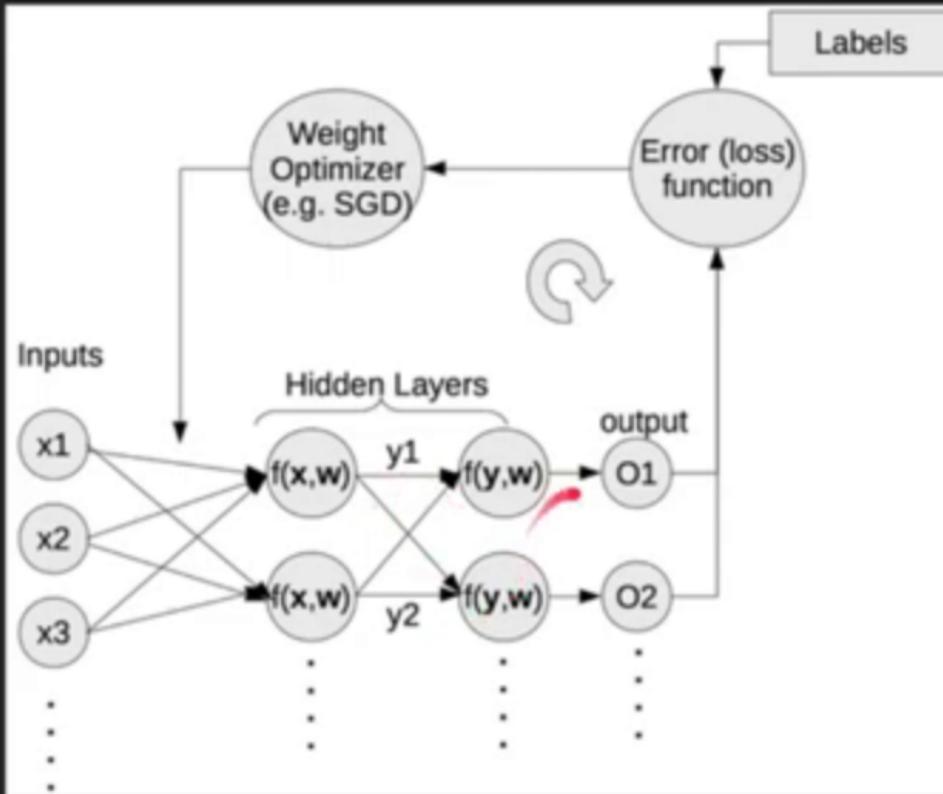
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- Data
- Model
- Parameters
- Loss/Error Function
- Optimizer



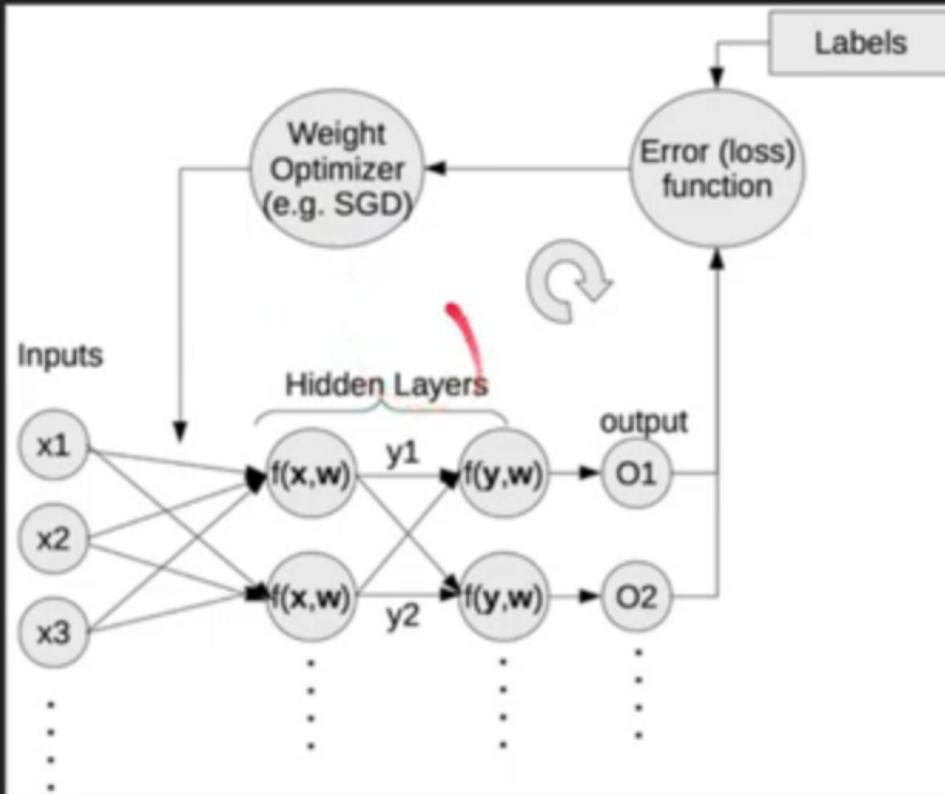
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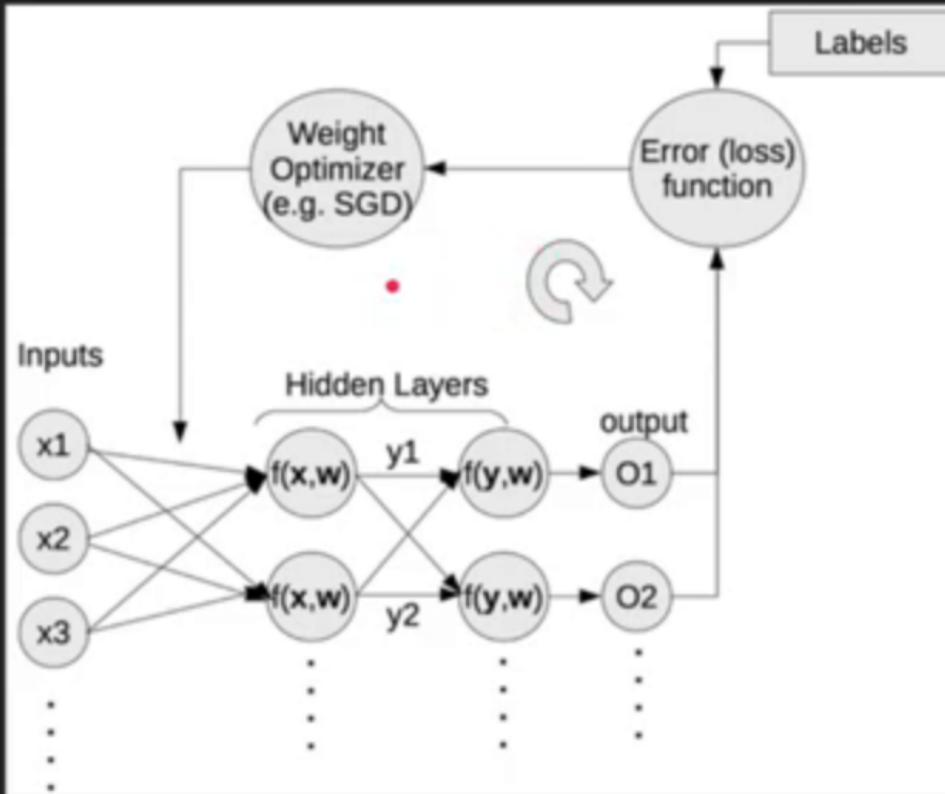
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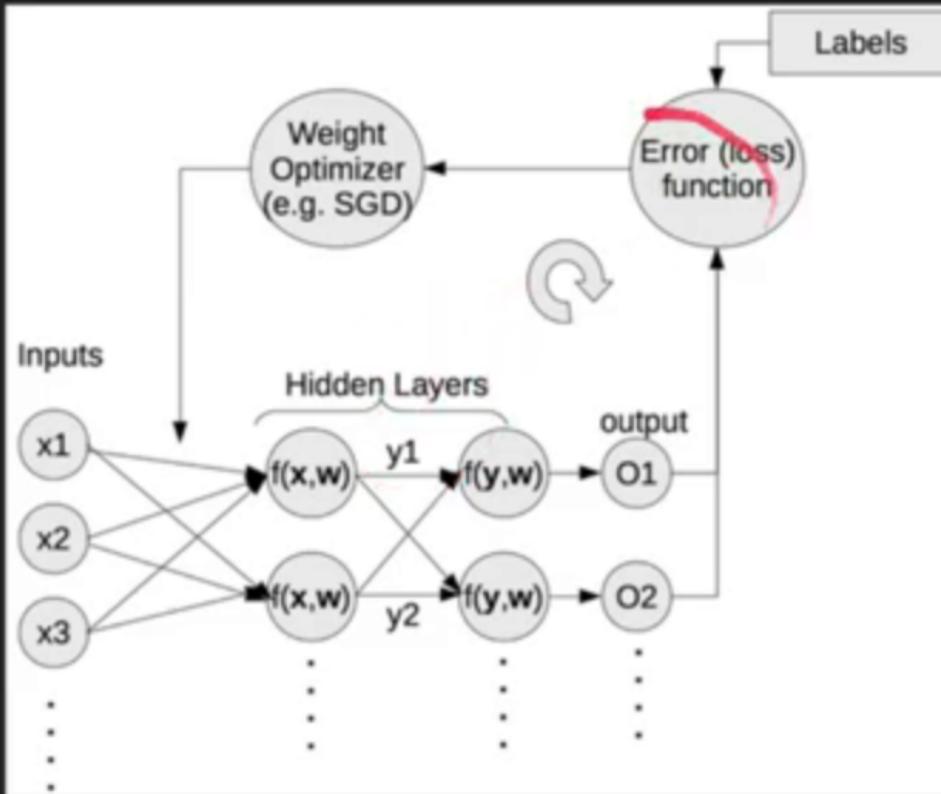
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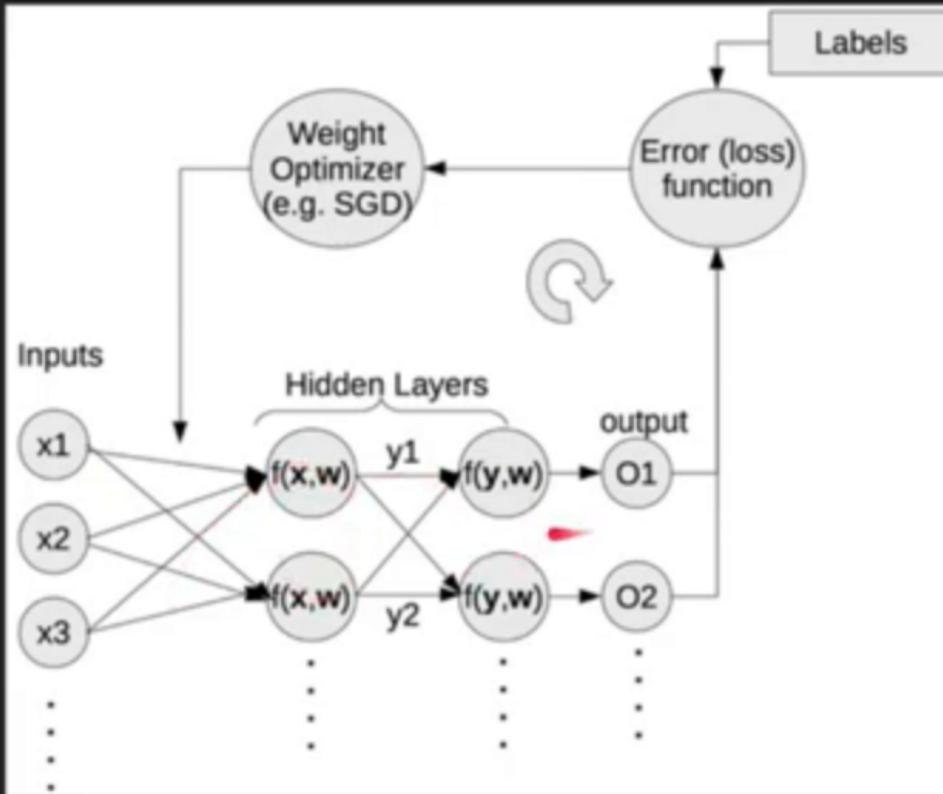
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