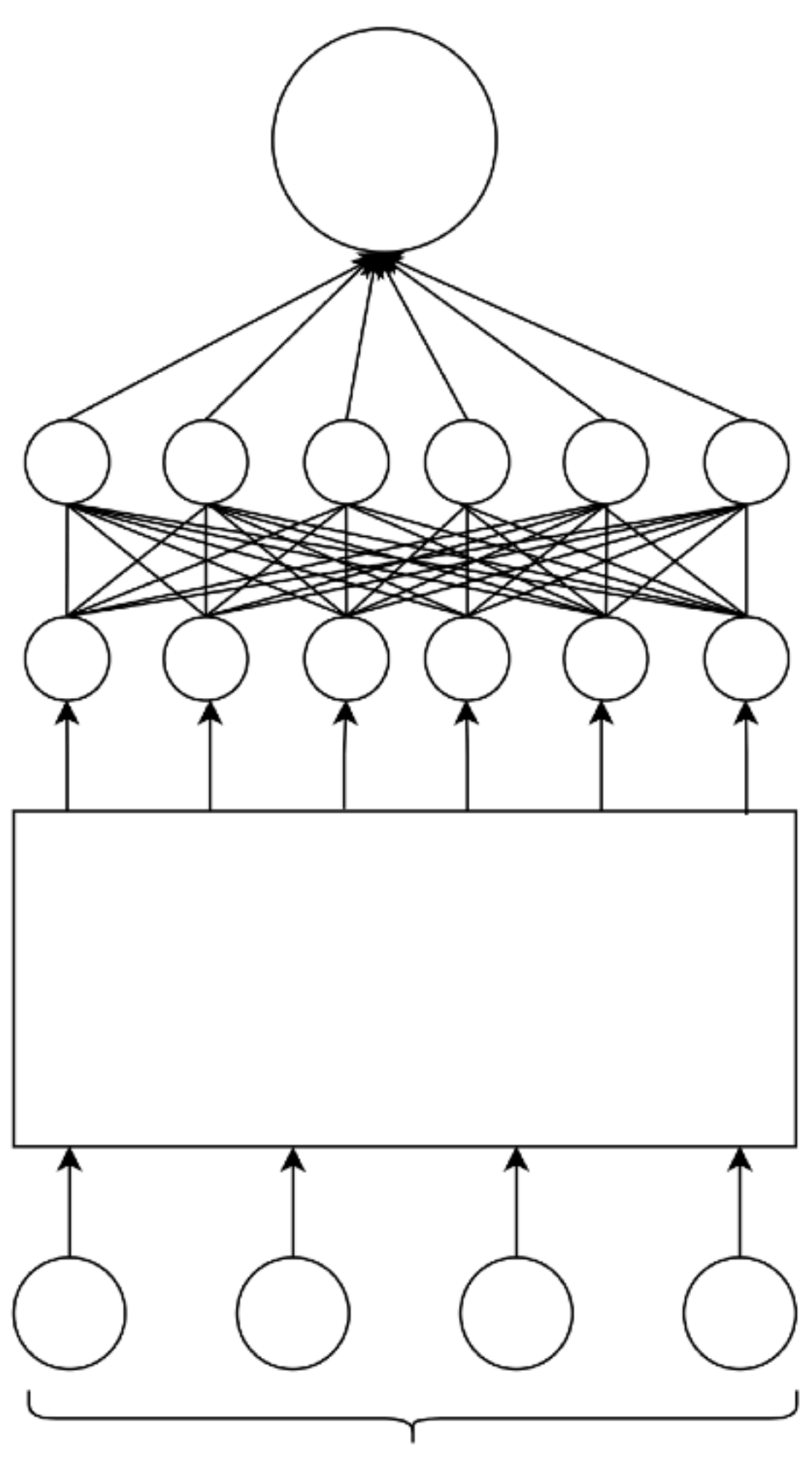
46



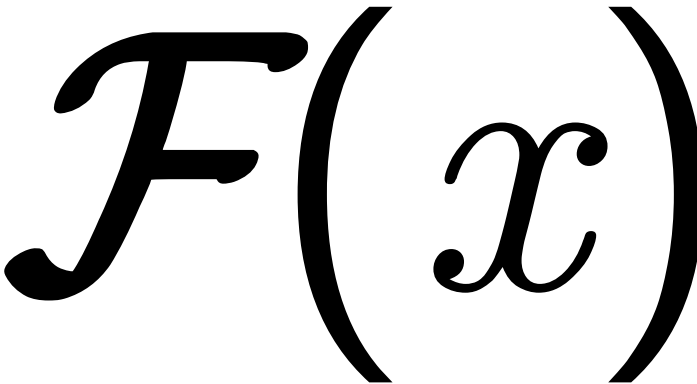

Input: x

DNN Classifier

Model Parameters: θ

Second Last Layer/Logits : $\boldsymbol{\mathcal{H}}(x)$

Class Probabilities: $\mathcal{P}_{\mathrm{j}}(x) = \mathbf{softmax}(\mathcal{H}_{\mathrm{i}}(x))$



$$\mathcal{F}(x) = \arg\max_{j} \mathcal{P}_j$$

SUCCESS OF DEEP NEURAL NETWORKS

- Computer Vision
  - Object Detection
  - Image Classification
  - Style Transfer
- Natural Language Processing
  - Machine Translation
  - Topic Modelling
  - Text Summary
- Decision Making
  - Self Driving Cars
  - Alpha Go

$$\mathcal{F}(x) = \arg\max_j \mathcal{P}_j$$

Class Probabilities: $\mathcal{P}_j(x) = \textbf{softmax}(\mathcal{H}_i(x))$

Second Last Layer/Logits : $\mathcal{H}(x)$