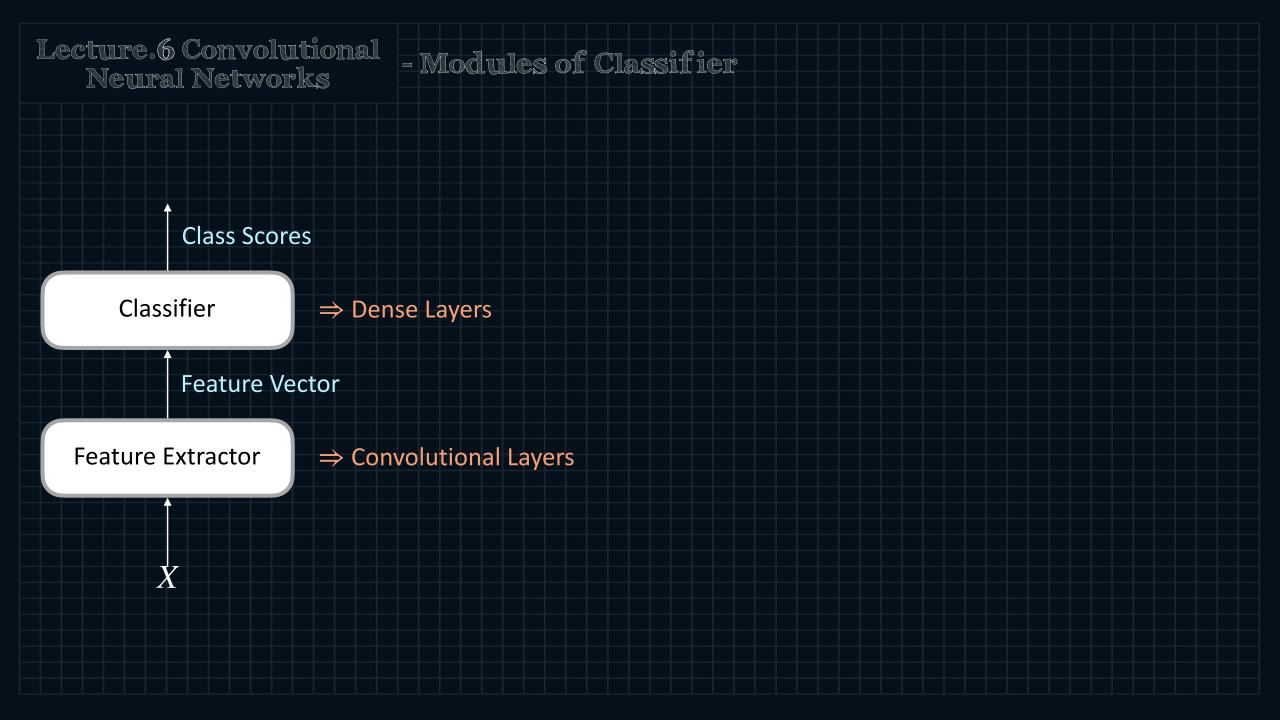
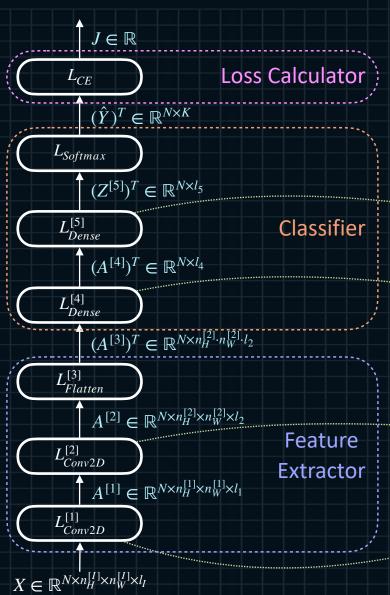


Forward Propagation Neural Networks Lecture.7 Convolutional Neural Networks



Lecture.6 Convolutional Neural Networks

- Convolutional Neural Networks



$$\overrightarrow{b}^{[5]} \in \mathbb{R}^{l_4 \times l_5}$$

$$\overrightarrow{b}^{[5]} \in \mathbb{R}^{l_5}$$

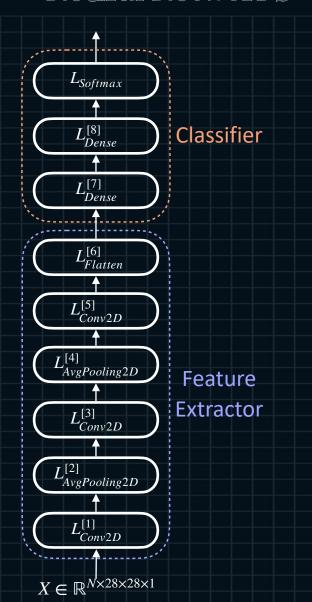
$$\overrightarrow{b}^{[4]} \in \mathbb{R}^{n_H^{[2]} \cdot n_W^{[2]} \cdot l_2 \times l_4}$$

$$\overrightarrow{b}^{[4]} \in \mathbb{R}^{l_4}$$

$$\mathcal{K}^{[2]} \in \mathbb{R}^{f^{[2]} \times f^{[2]} \times l_1 \times l_2} \\
\overrightarrow{b}^{[2]} \in \mathbb{R}^{l_2} \\
\mathcal{K}^{[1]} \in \mathbb{R}^{f^{[1]} \times f^{[1]} \times l_1 \times l_1} \\
\overrightarrow{b}^{[1]} \in \mathbb{R}^{l_1}$$

Lecture.6 Convolutional Neural Networks

- LeNet



		# of						
LeNet	Filter Size	Filters	Padding	Strides	Activation	Output		
Input	-	1	-	-	-	28	28	1
Conv1	5	6	2	1	tanh	28	28	6
AvgPool1	2	-	0	2	-	14	14	6
Conv2	5	16	0	1	tanh	10	10	16
AvgPool2	2	-	0	2	-	5	5	16
Conv3	5	120	0	1	tanh	1	1	120
Flatten	-	-	-	-	-	120	-	-
Dense1	-	84	-	-	tanh	84	-	-
Dense2	-	10	-	-	softmax	10	-	-

