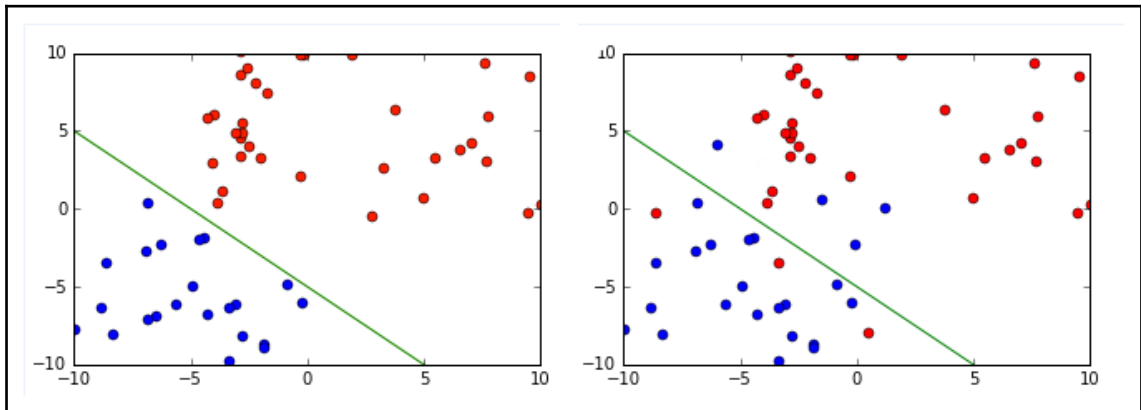
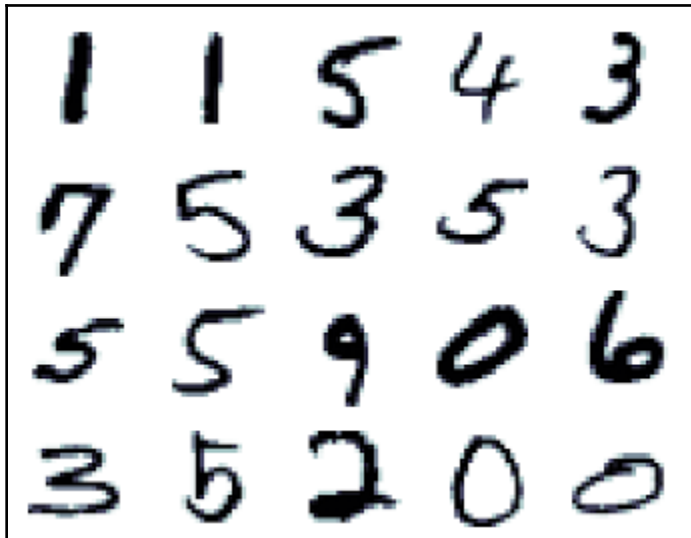


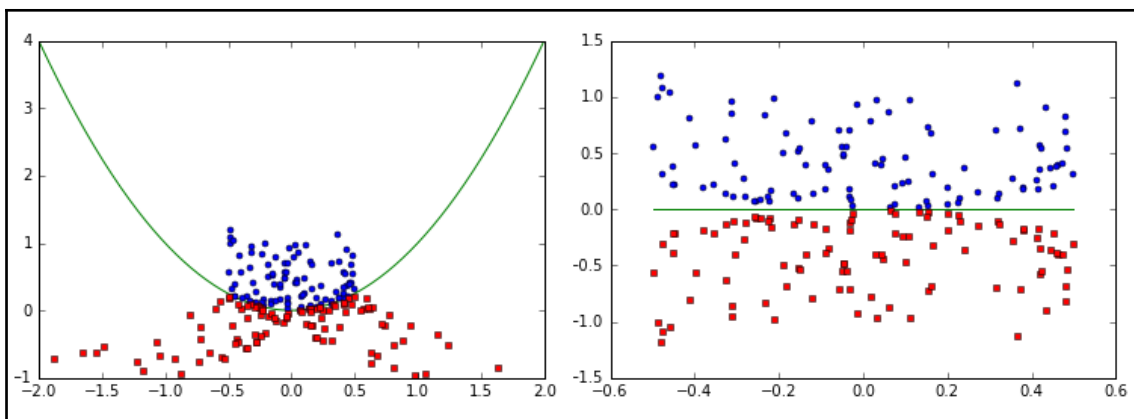
Table of Contents

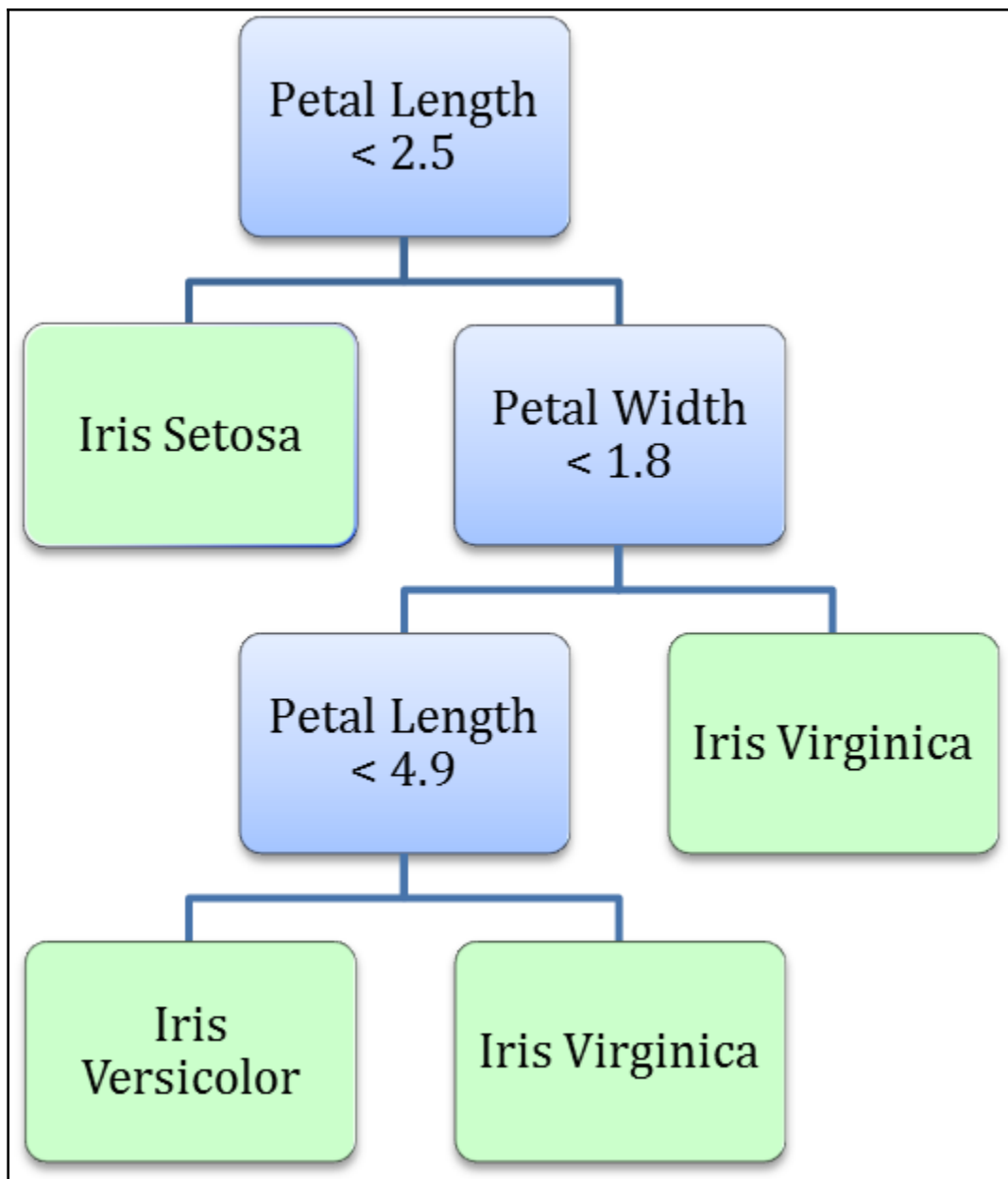
| | |
|-----------------------|----|
| Graphic bundle | 1 |
| Index | 80 |

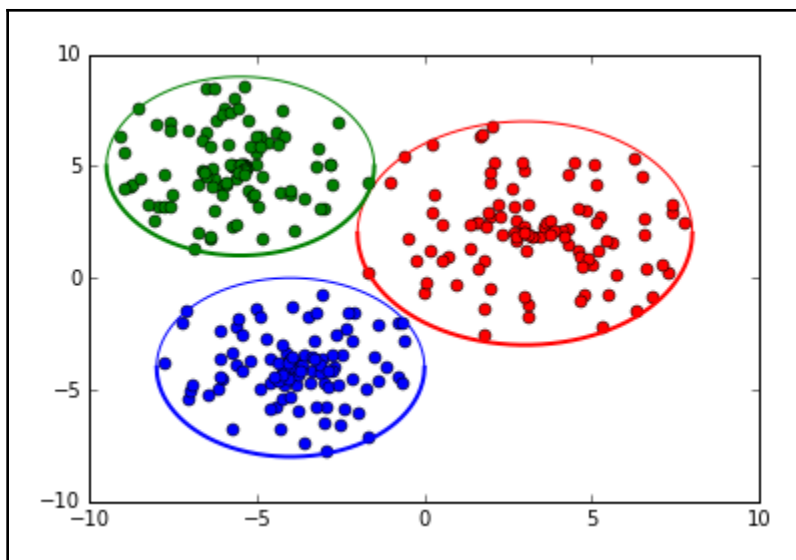
Graphic bundle


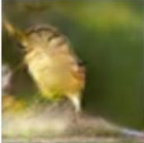












Chapter 1: Machine Learning - an Introduction

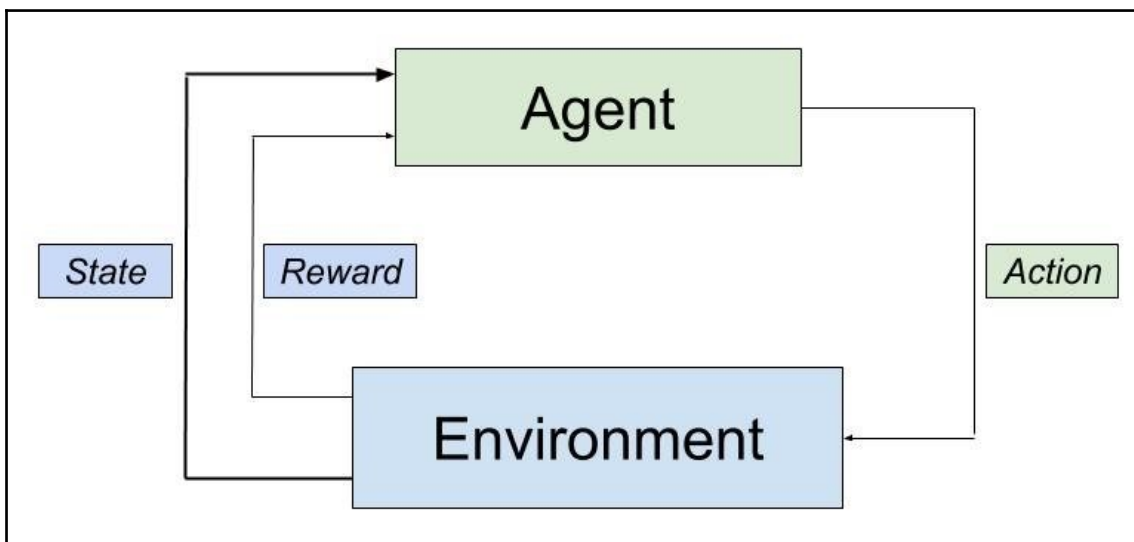
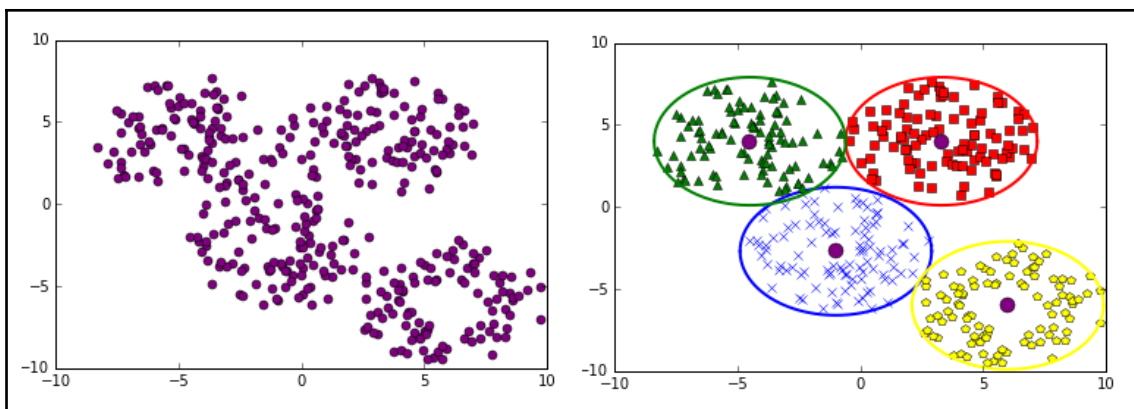


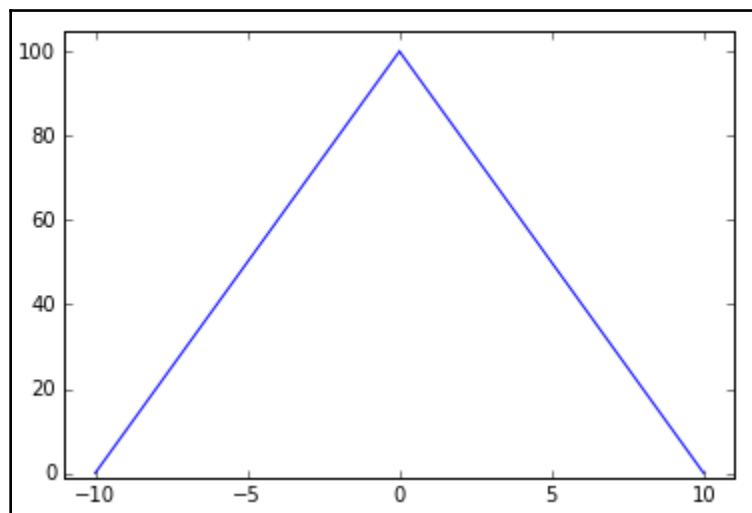
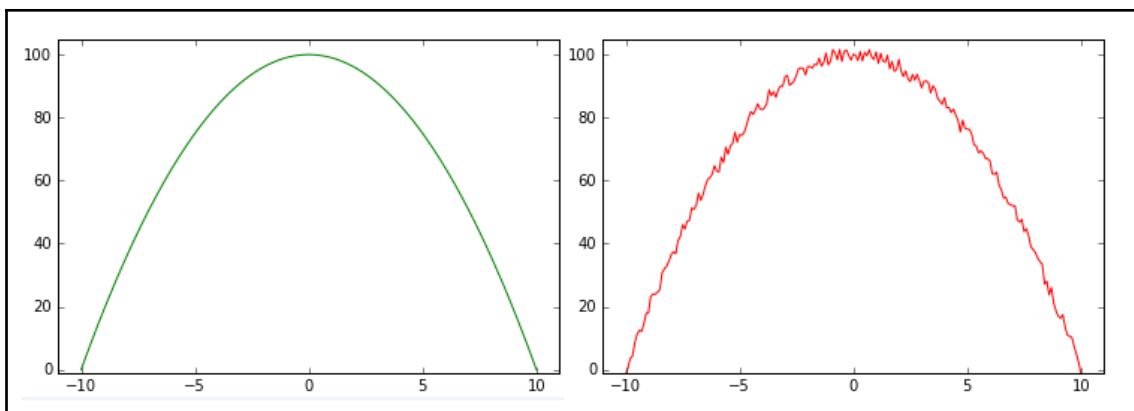


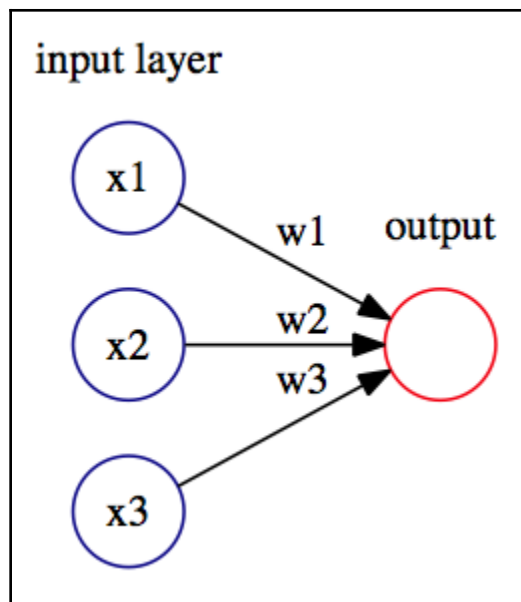


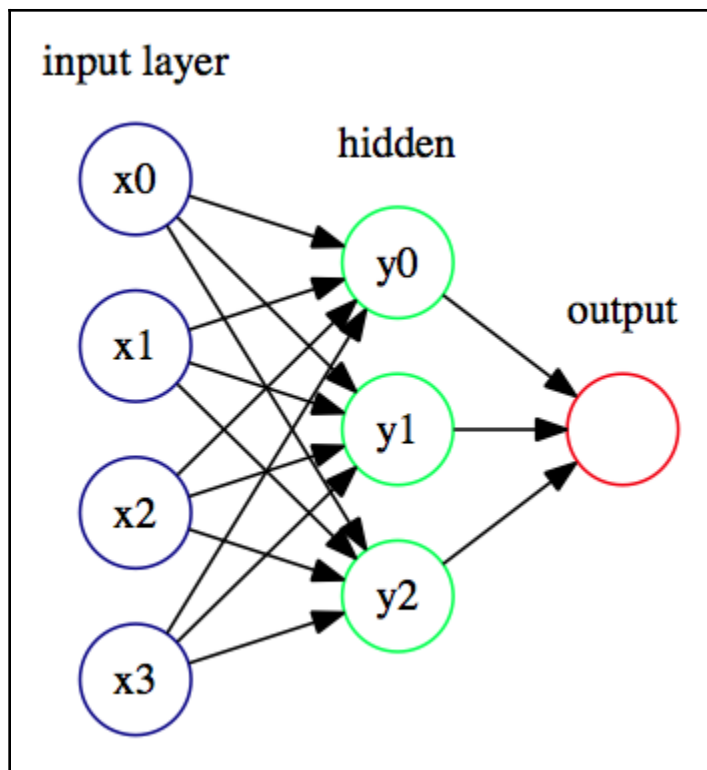


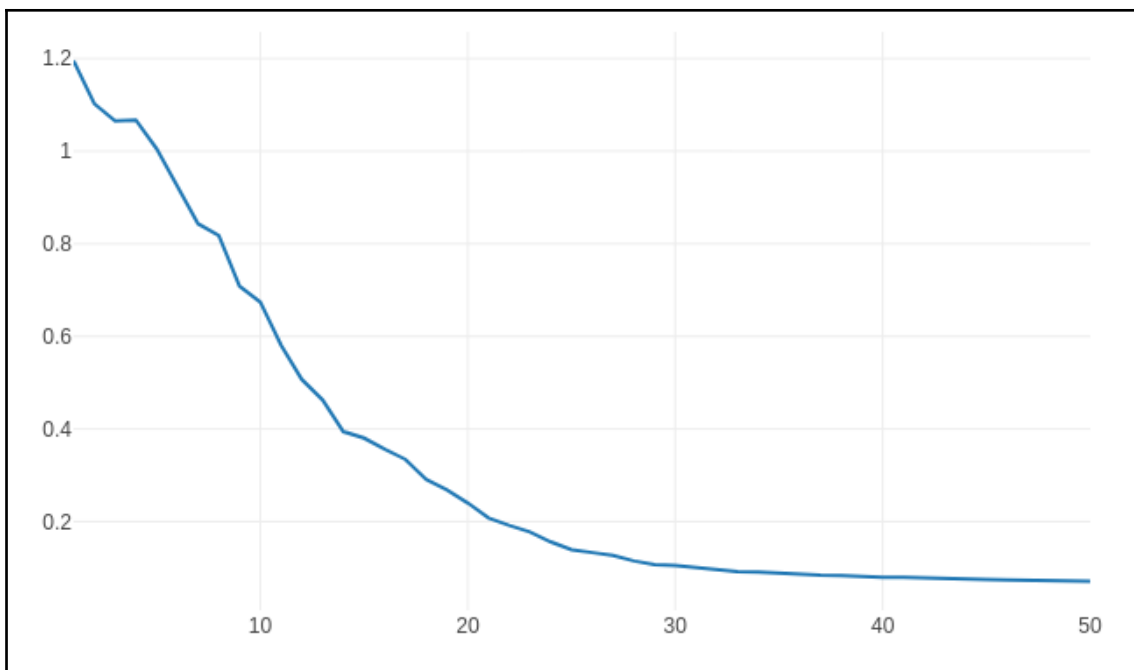
| Text description | This bird is blue with white and has a very short beak | This bird has wings that are brown and has a yellow belly | A white bird with a black crown and yellow beak | This bird is white, black, and brown in color, with a brown beak | The bird has small beak, with reddish brown crown and gray belly | This is a small, black bird with a white breast and white on the wingbars. | This bird is white black and yellow in color, with a short black beak |
|------------------|---|---|---|---|---|--|---|
| Stage-I images |  |  |  |  |  |  |  |
| Stage-II images |  |  |  |  |  |  |  |



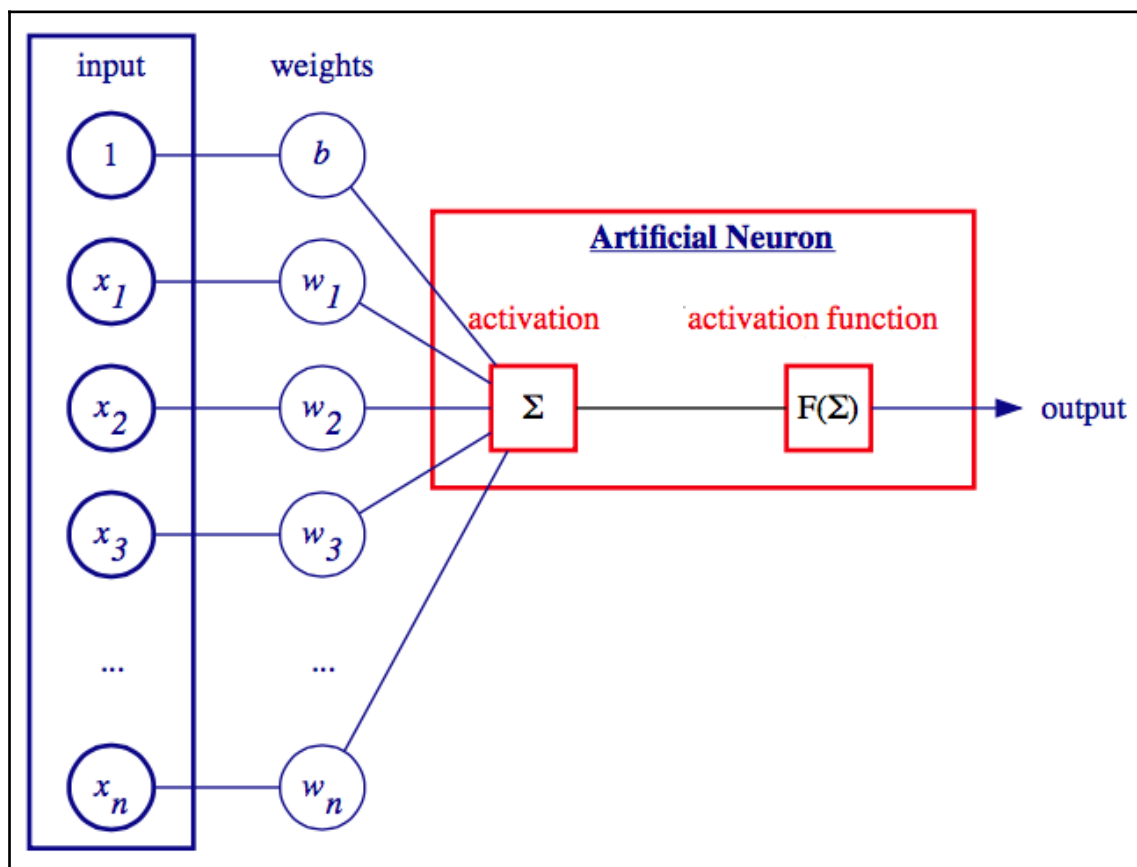


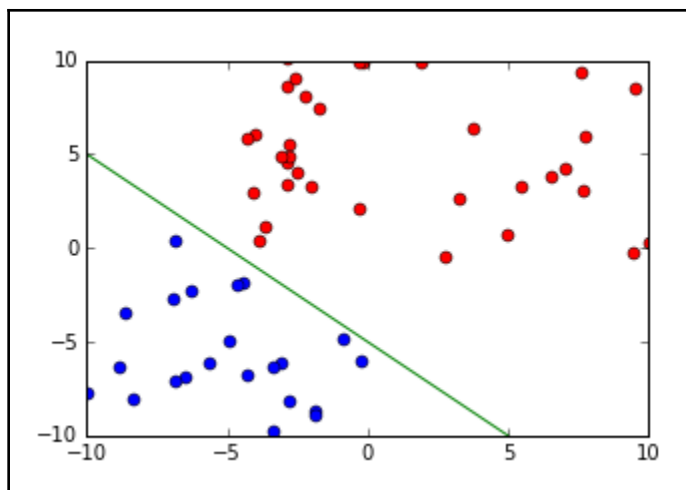


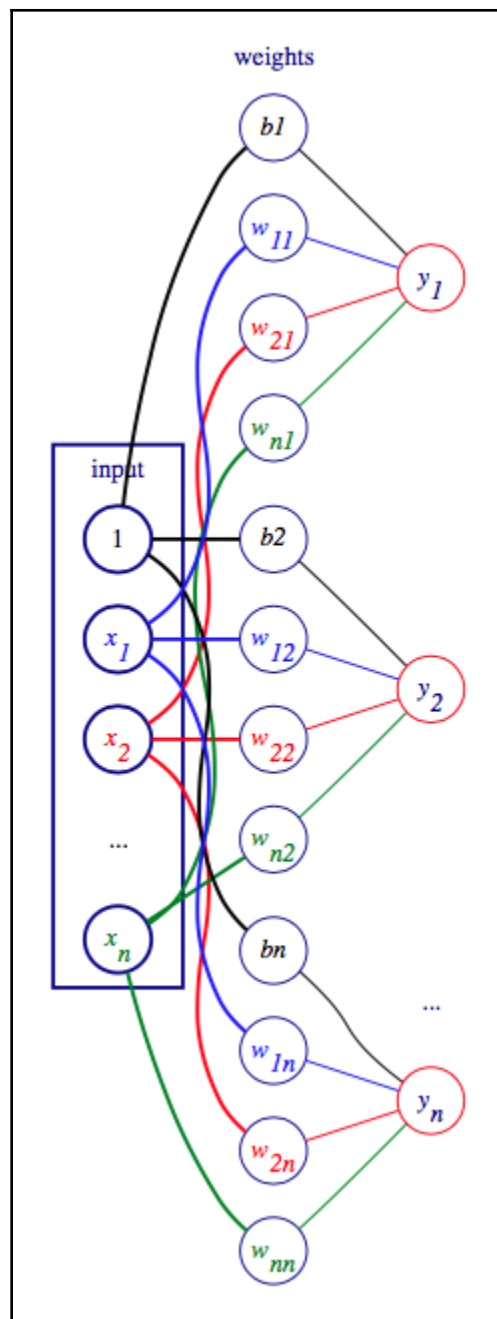


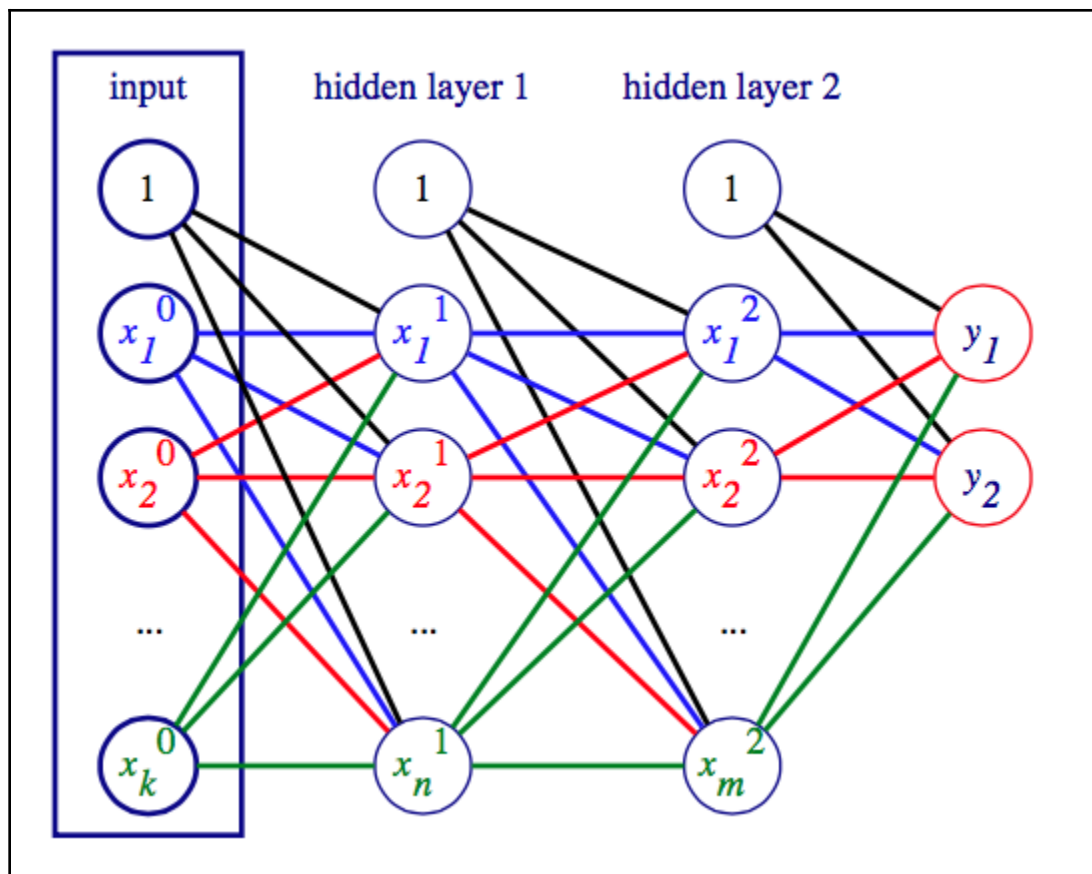


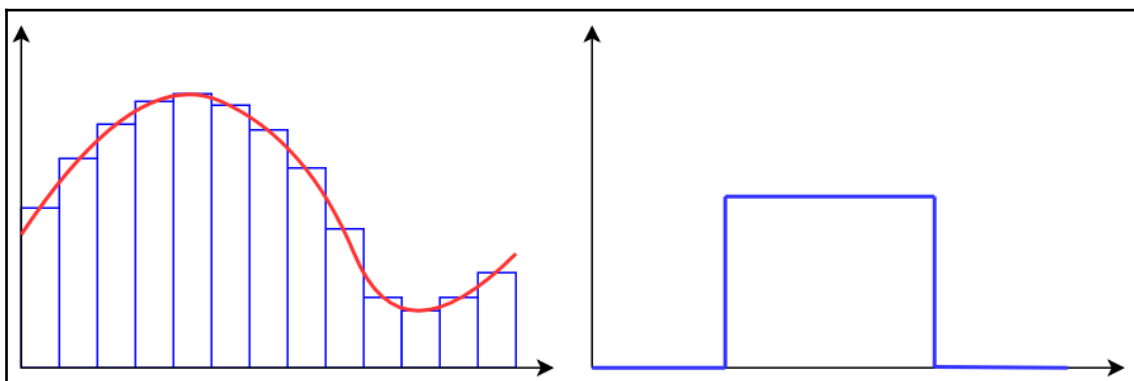
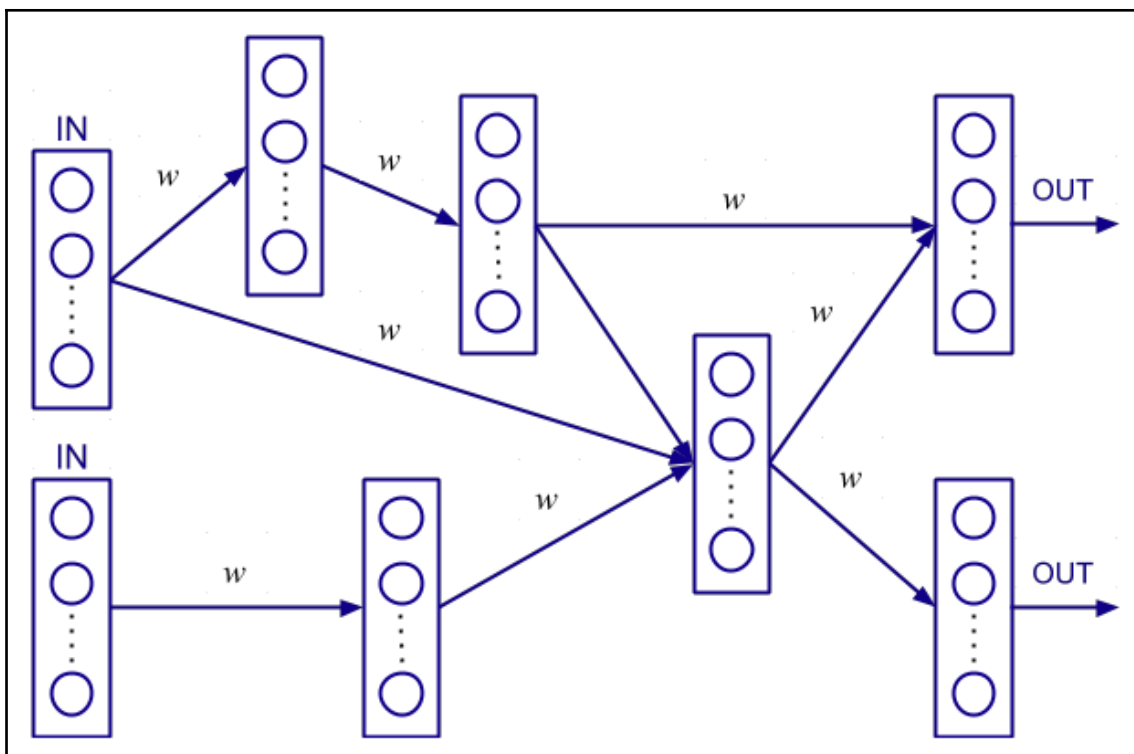
Chapter 2: Neural Networks

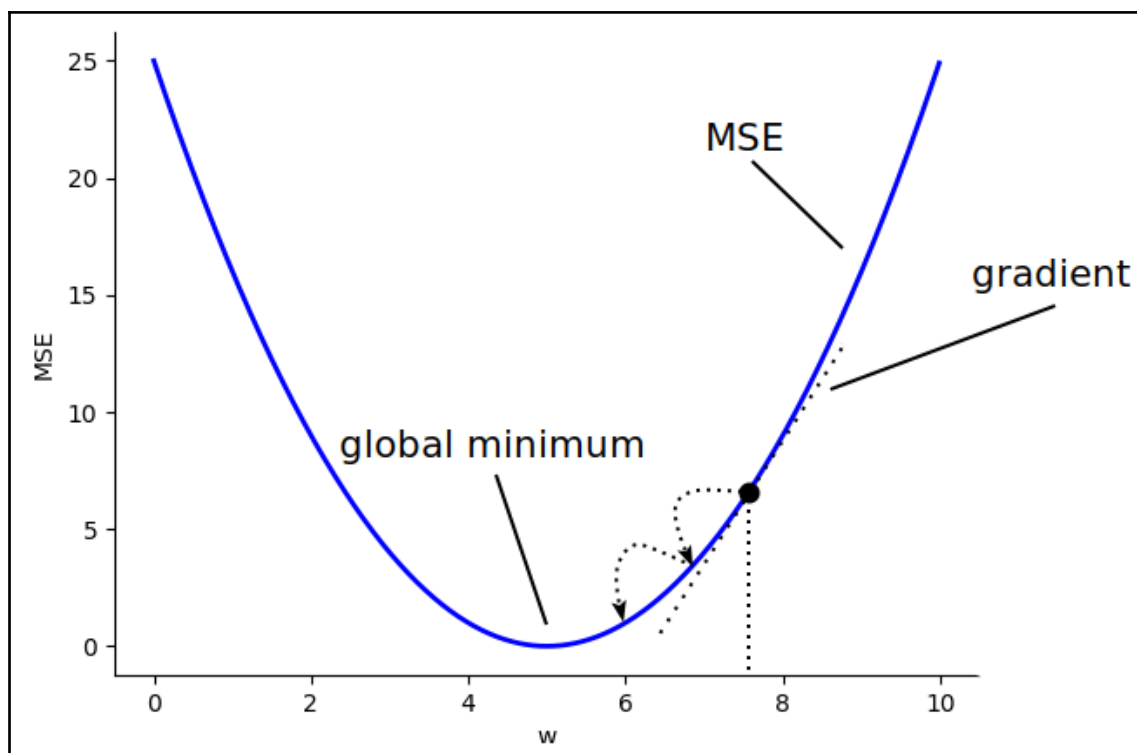
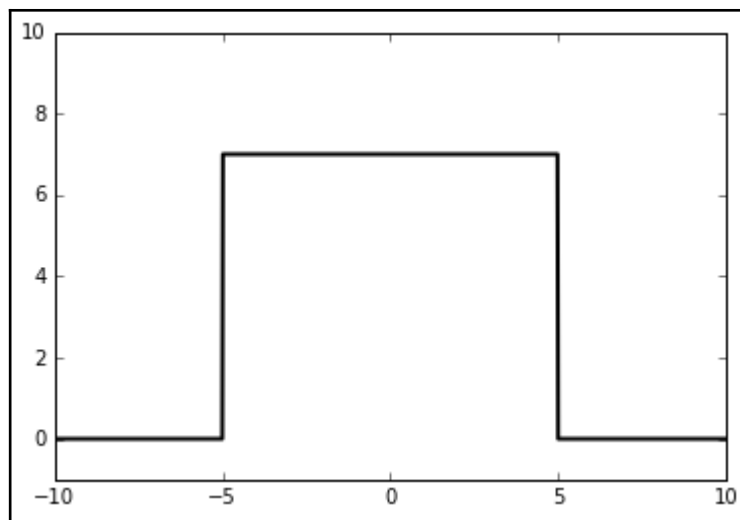


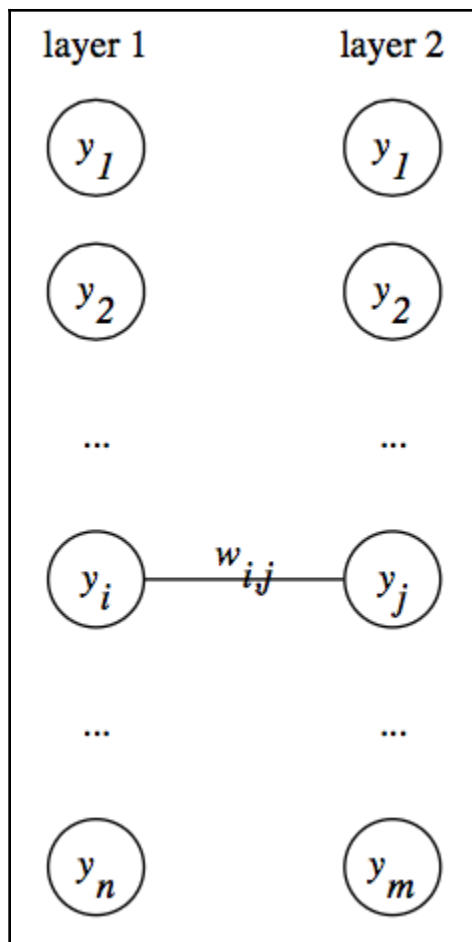


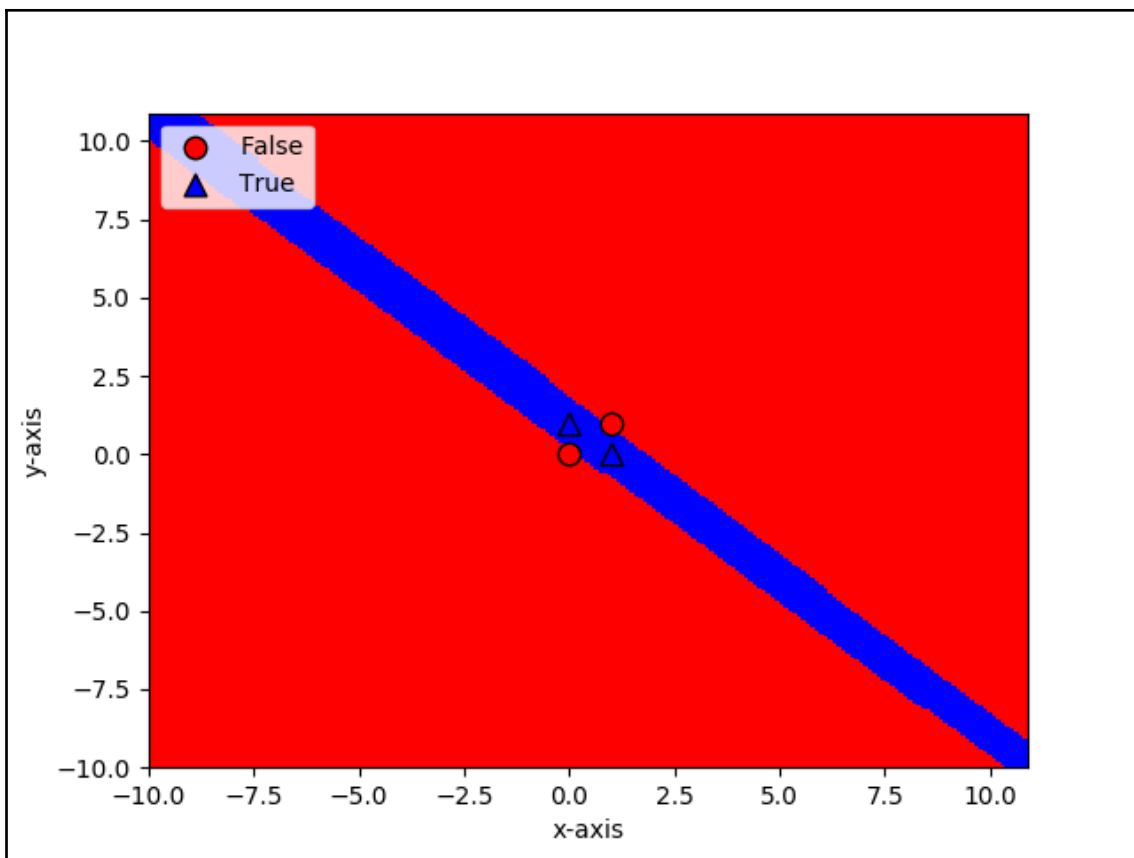


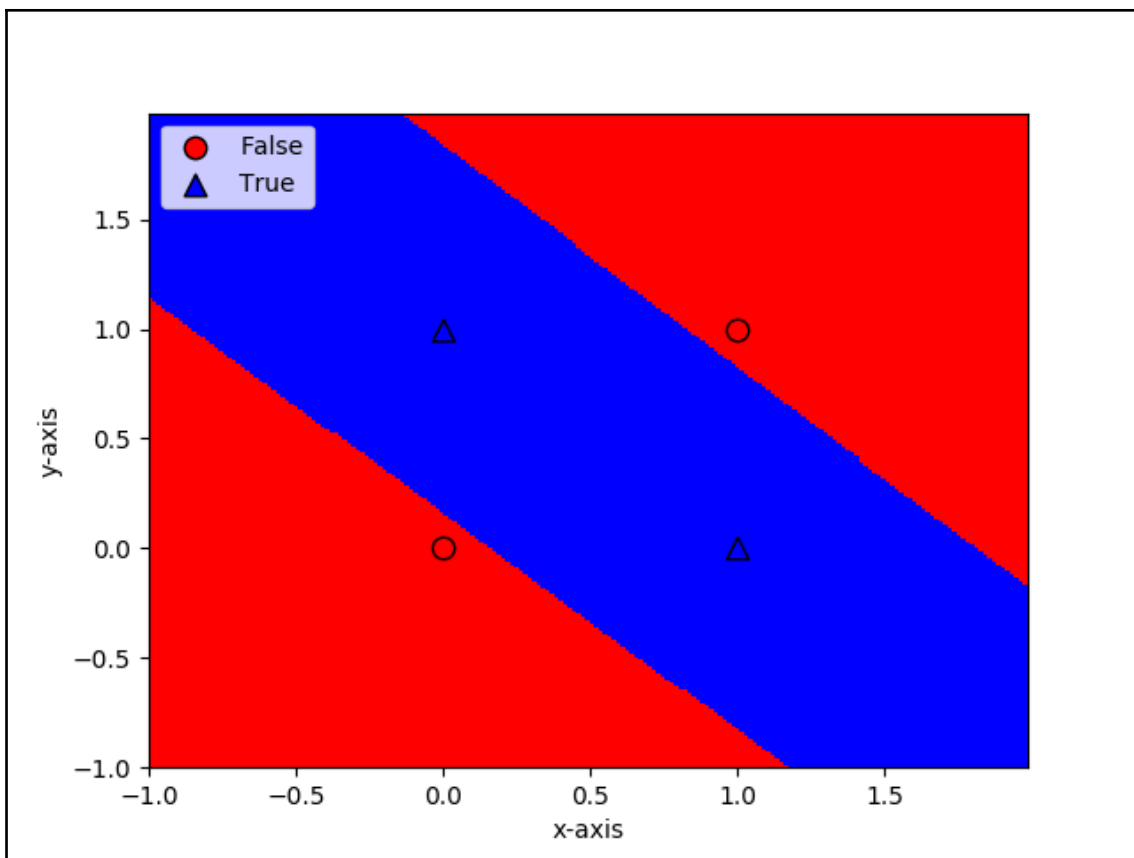


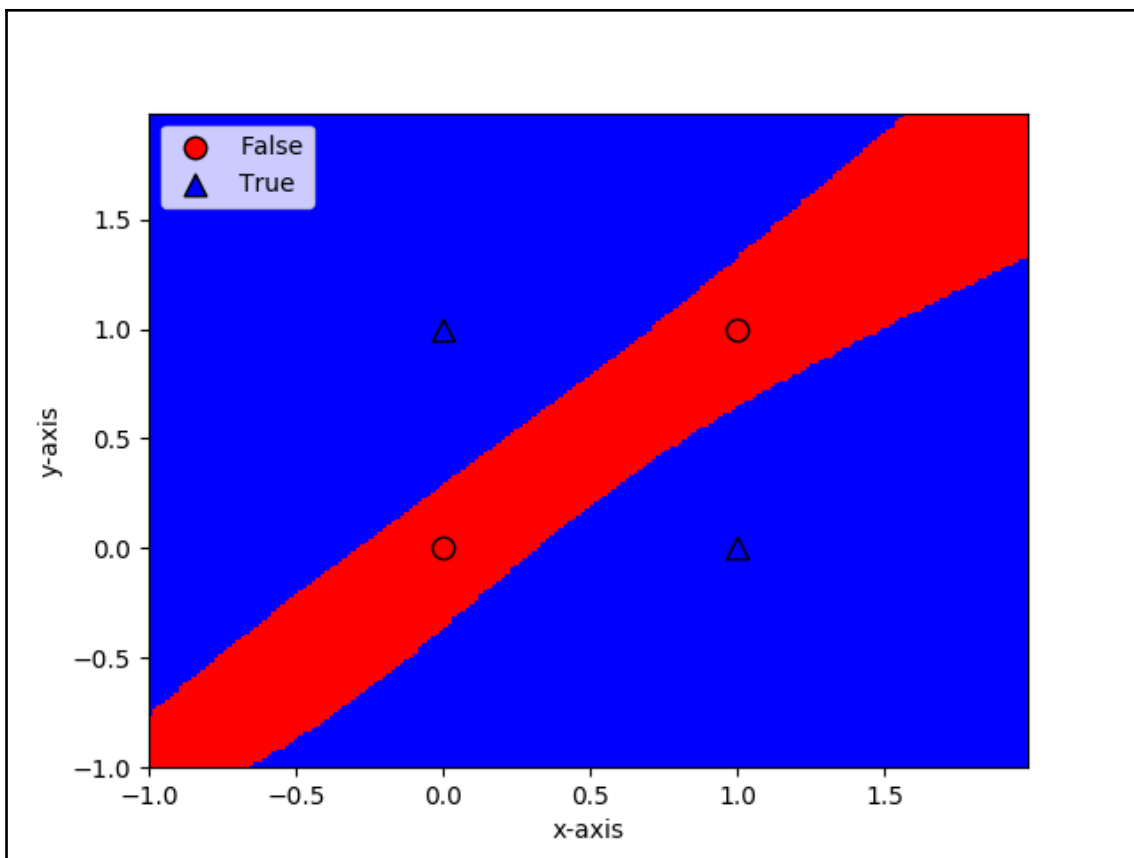


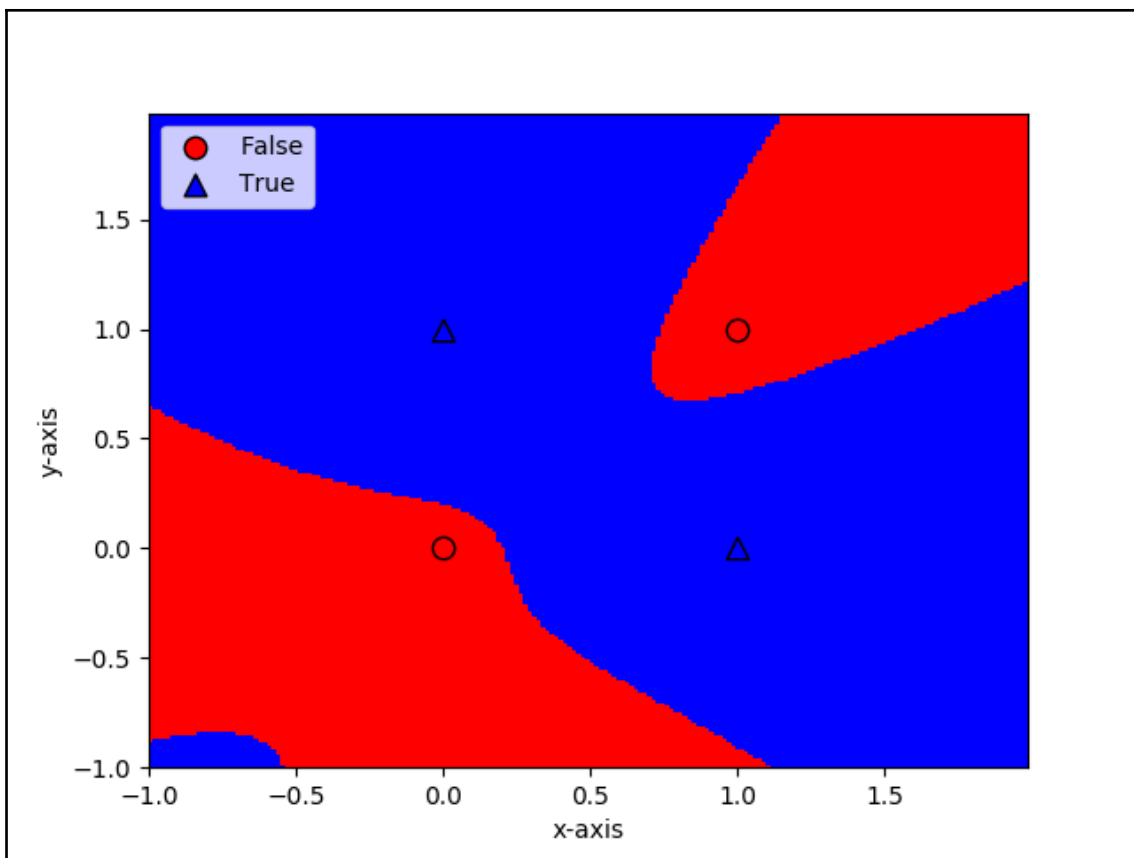




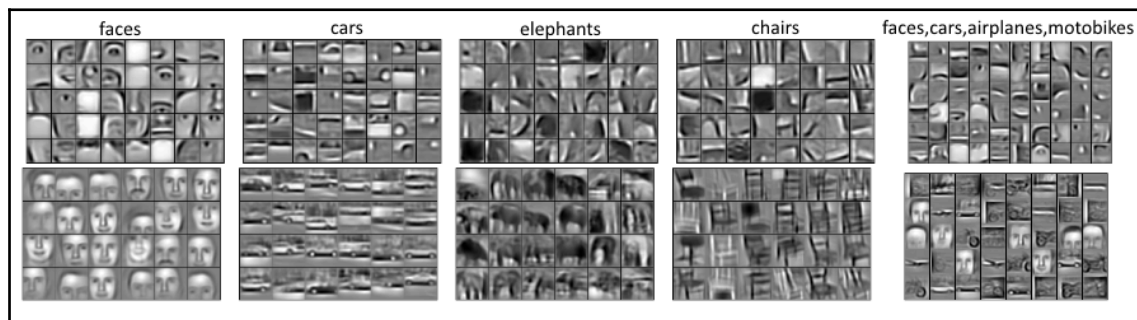
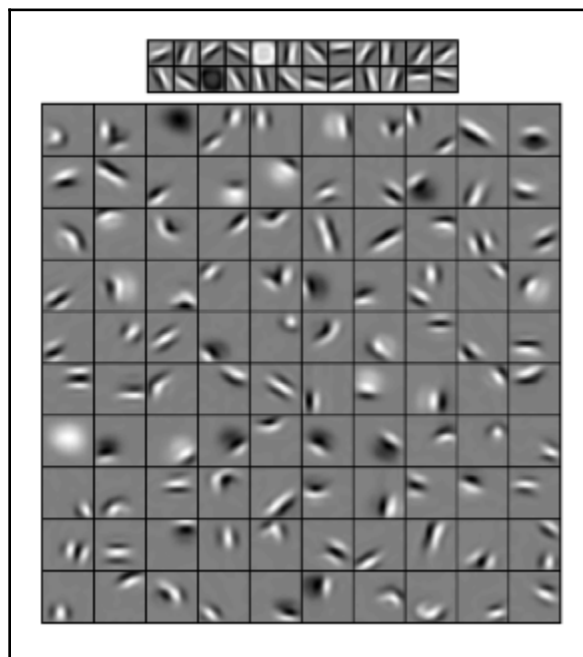


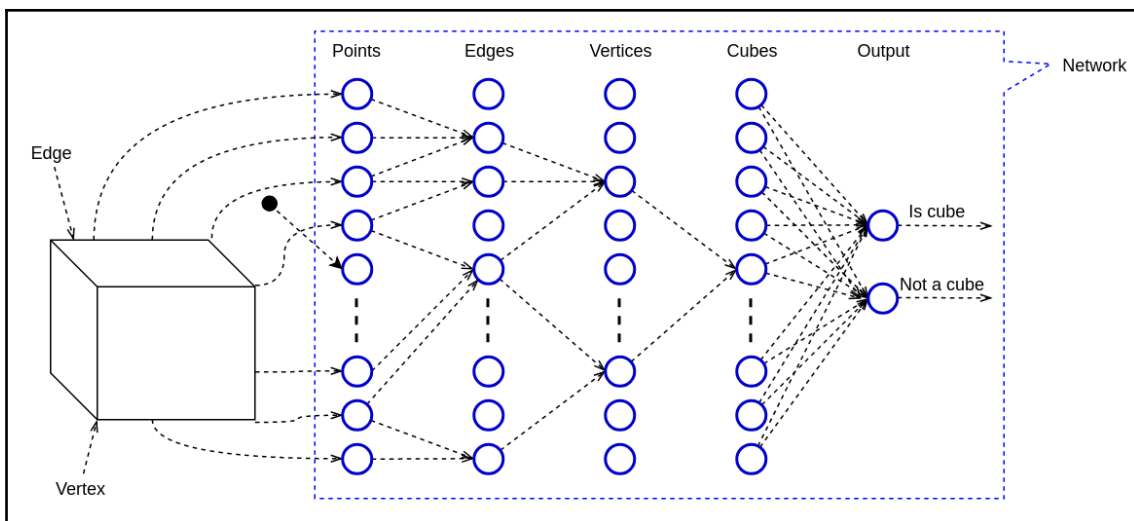


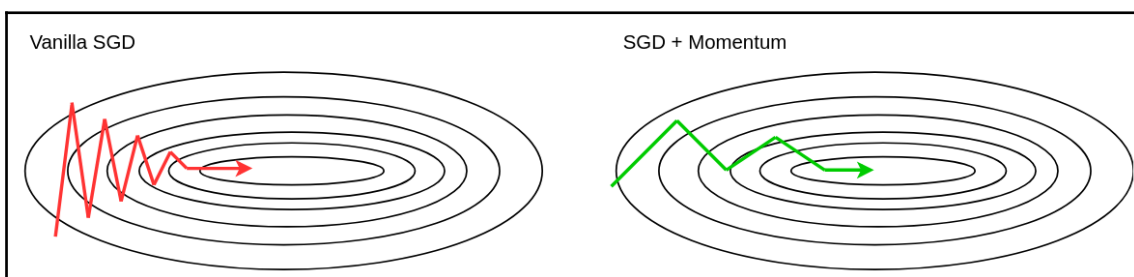
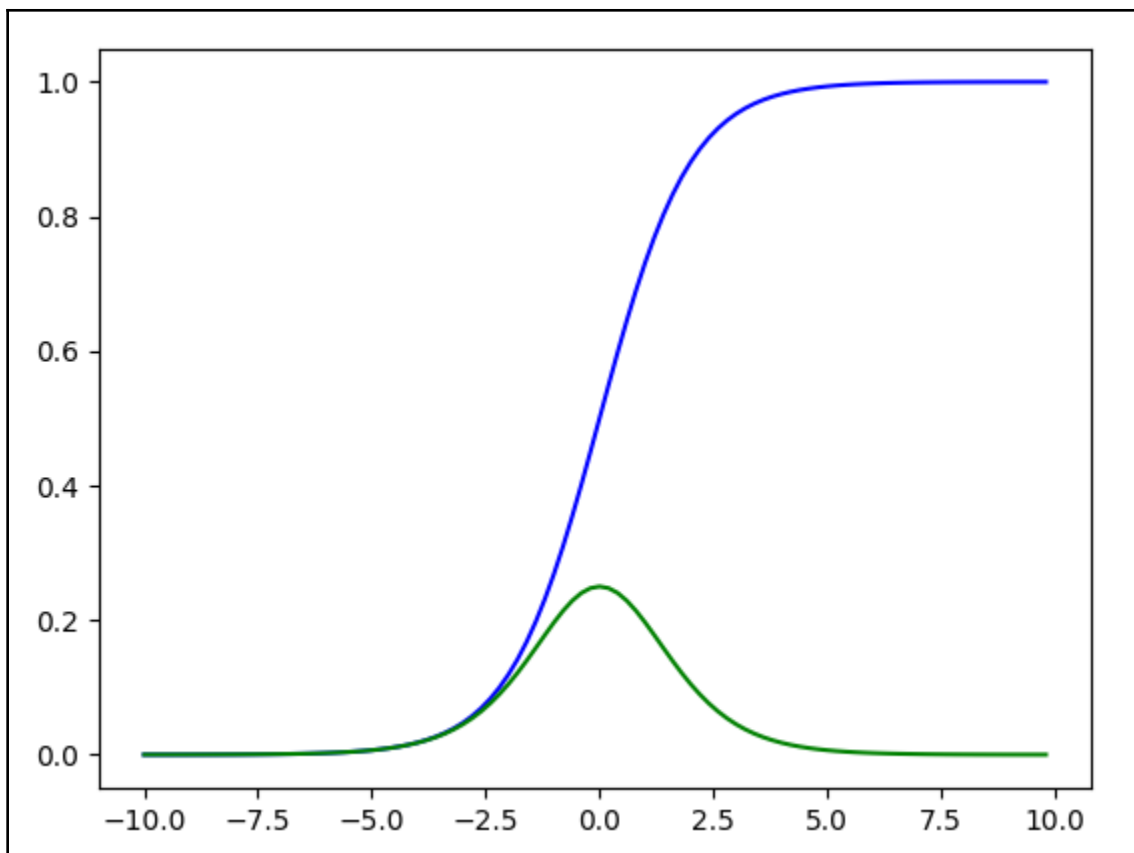


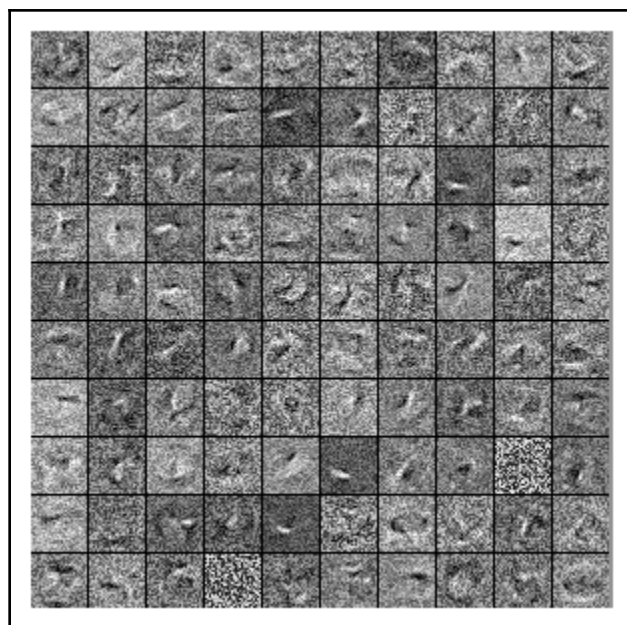


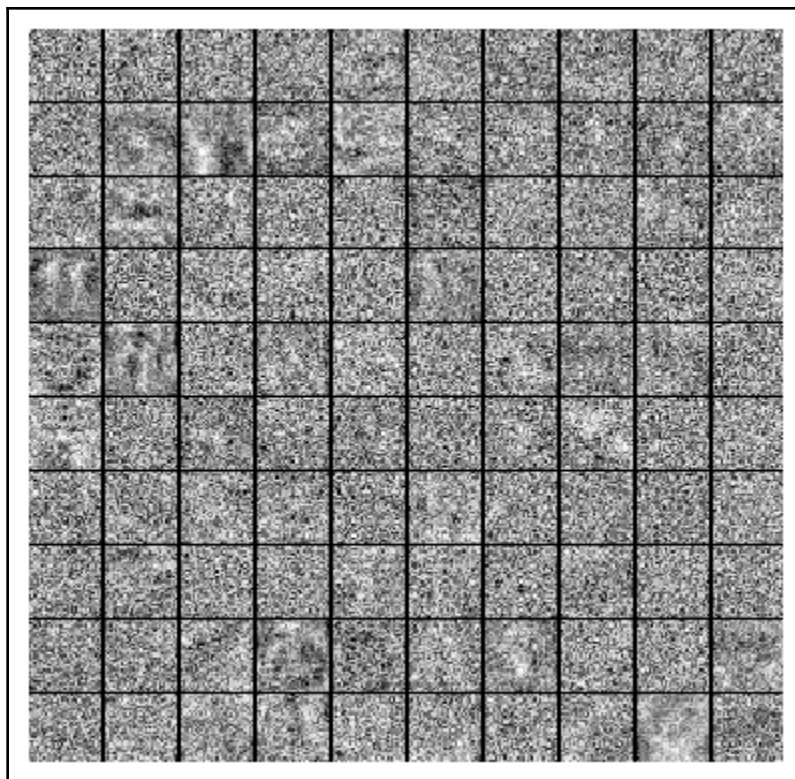
Chapter 3: Deep Learning Fundamentals



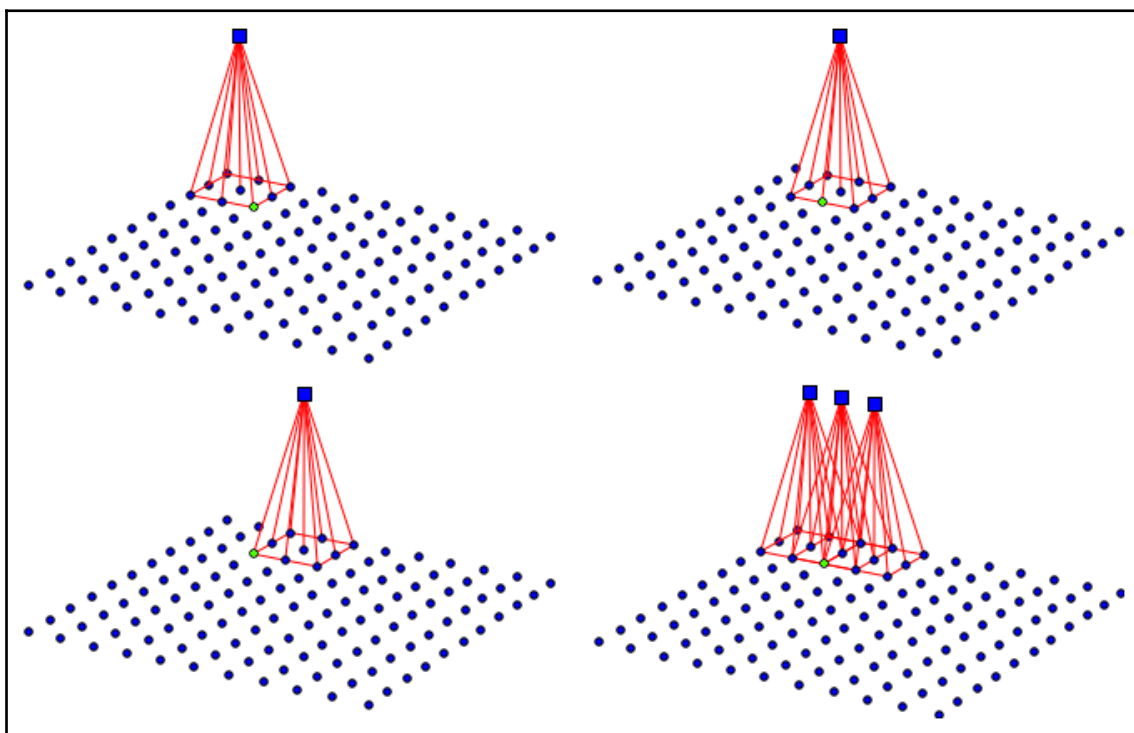
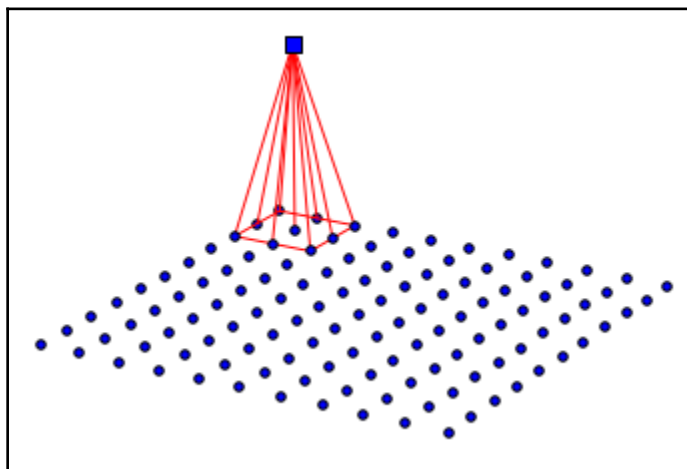


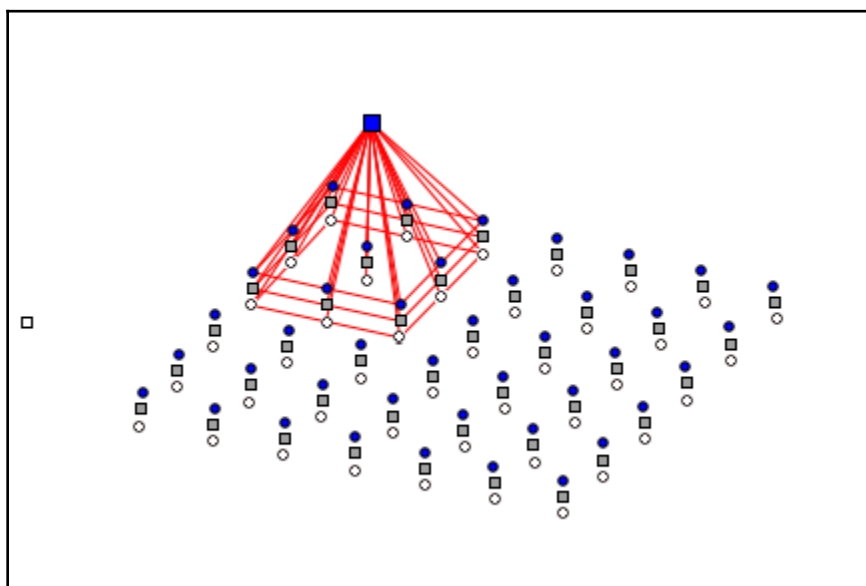
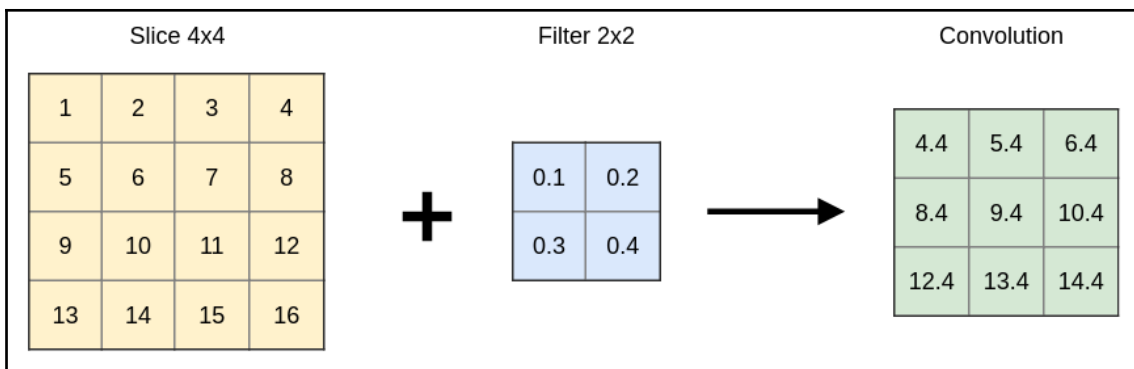


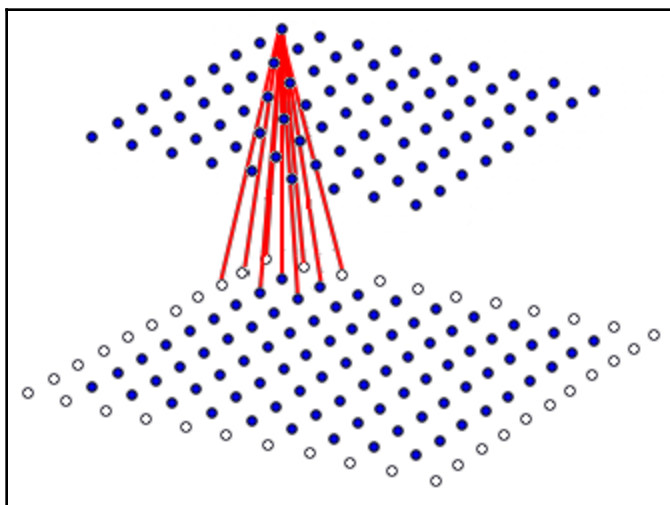
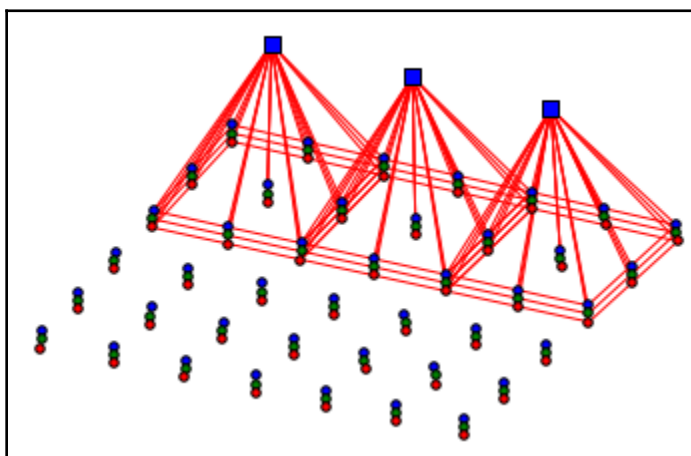


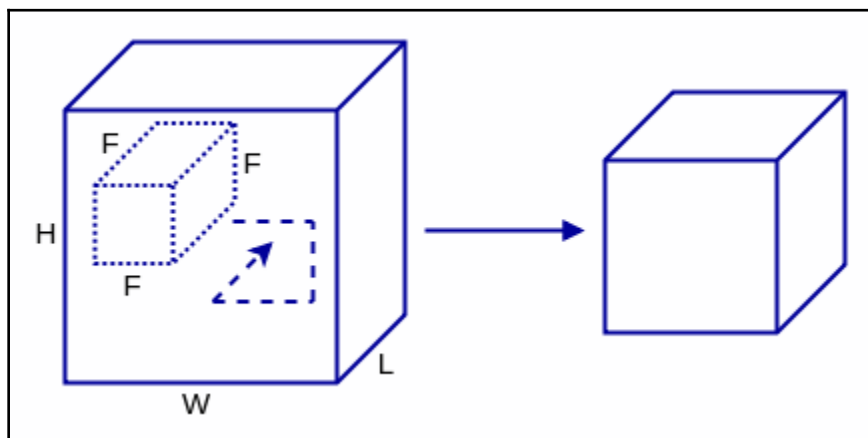
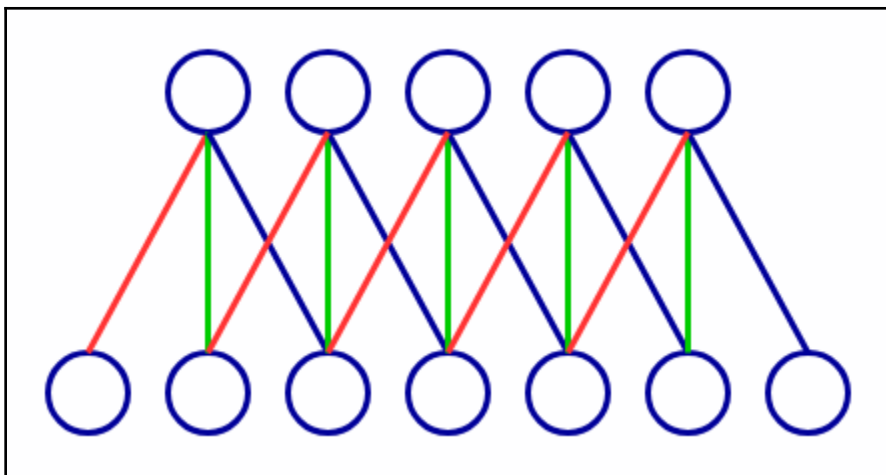


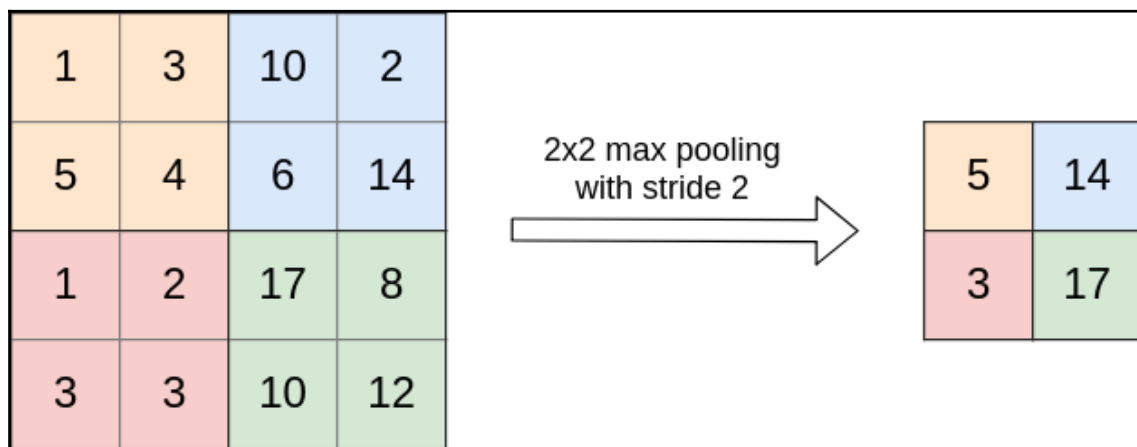
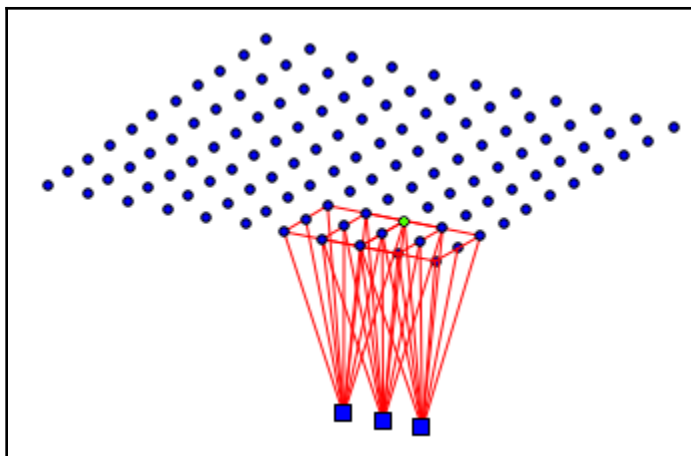
Chapter 4: Computer Vision with Convolutional Networks

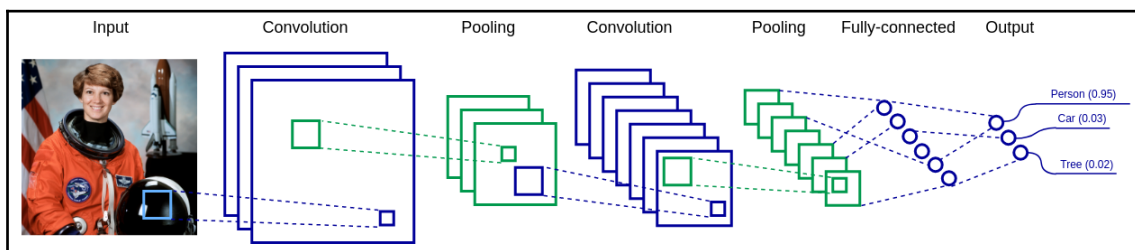
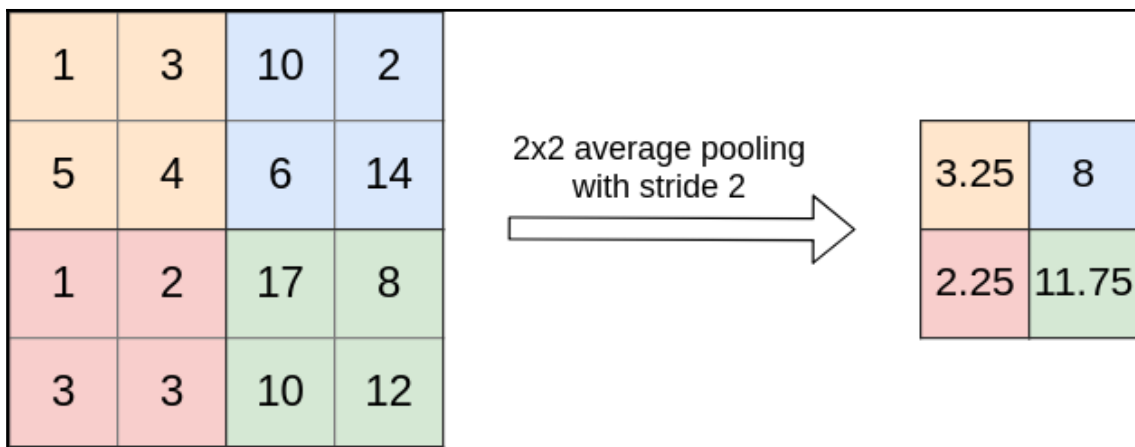


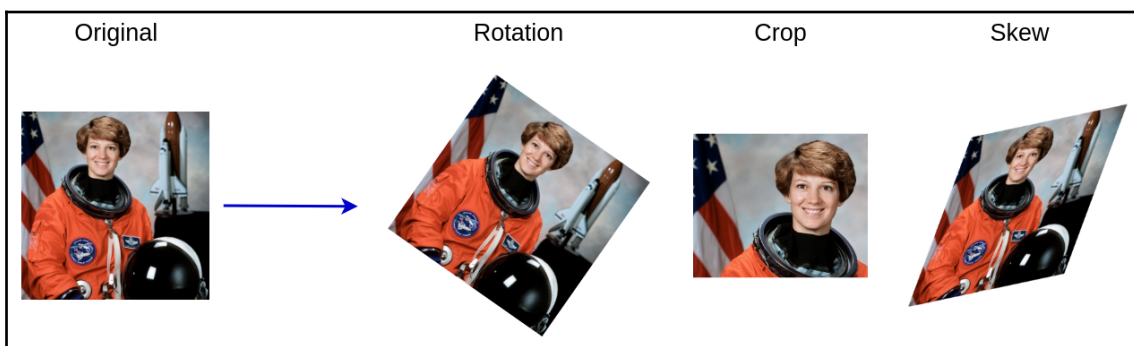
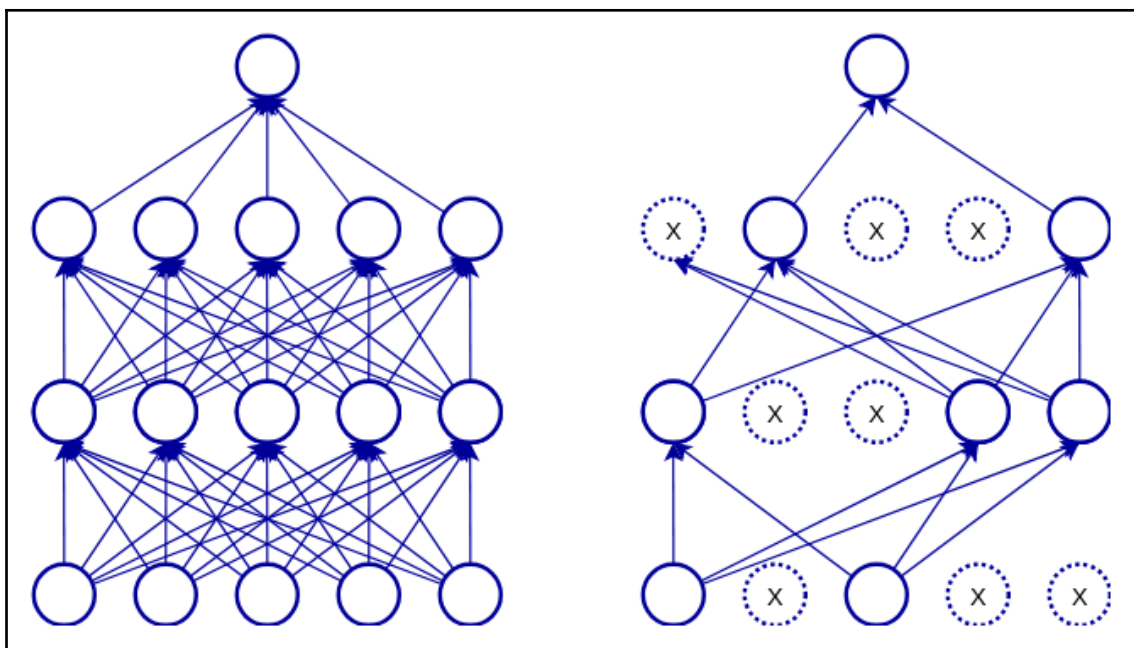




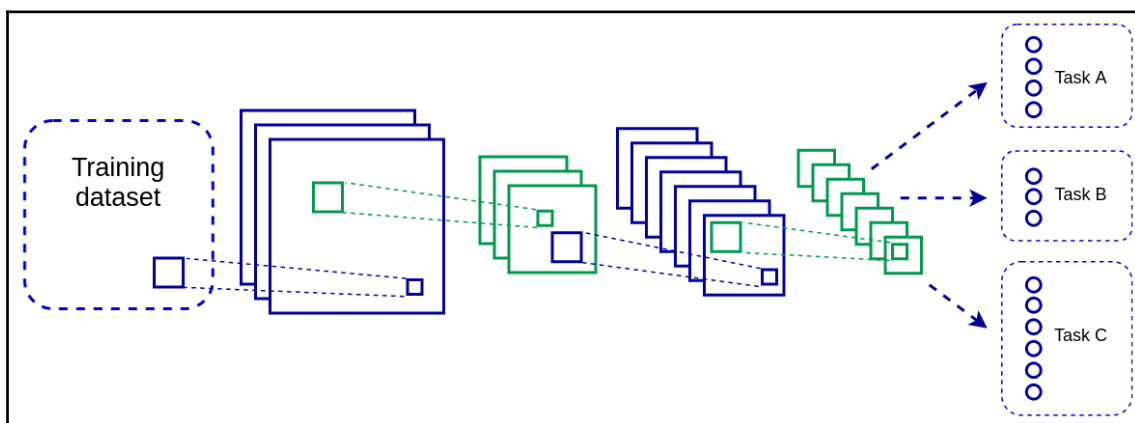




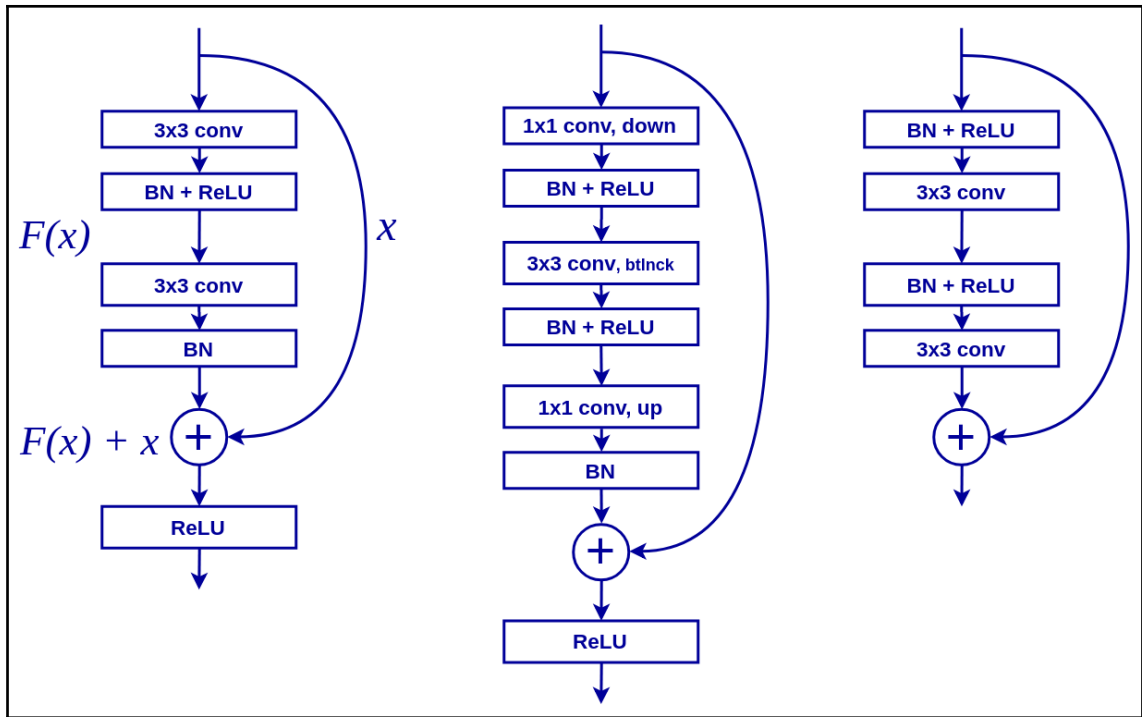




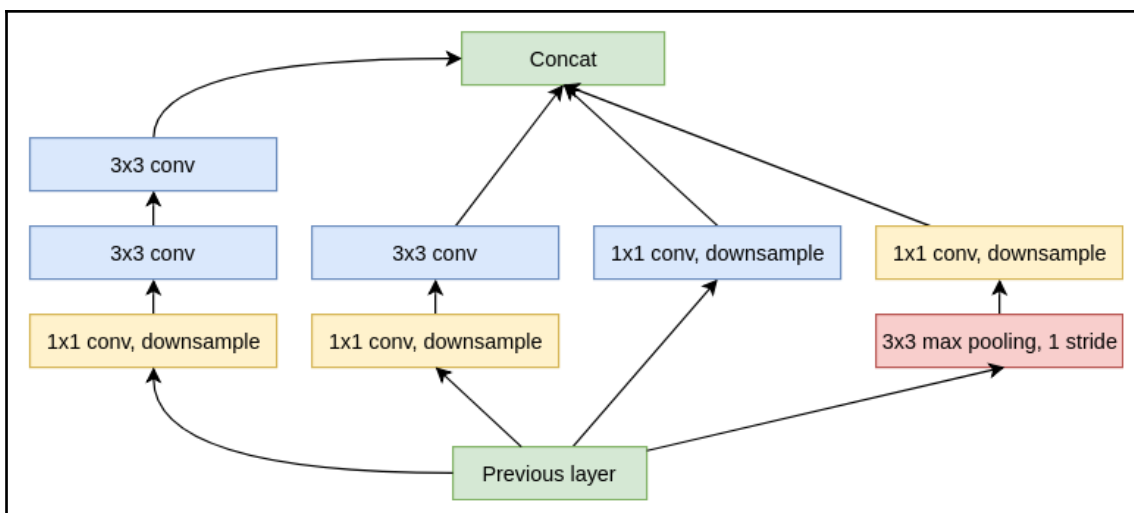
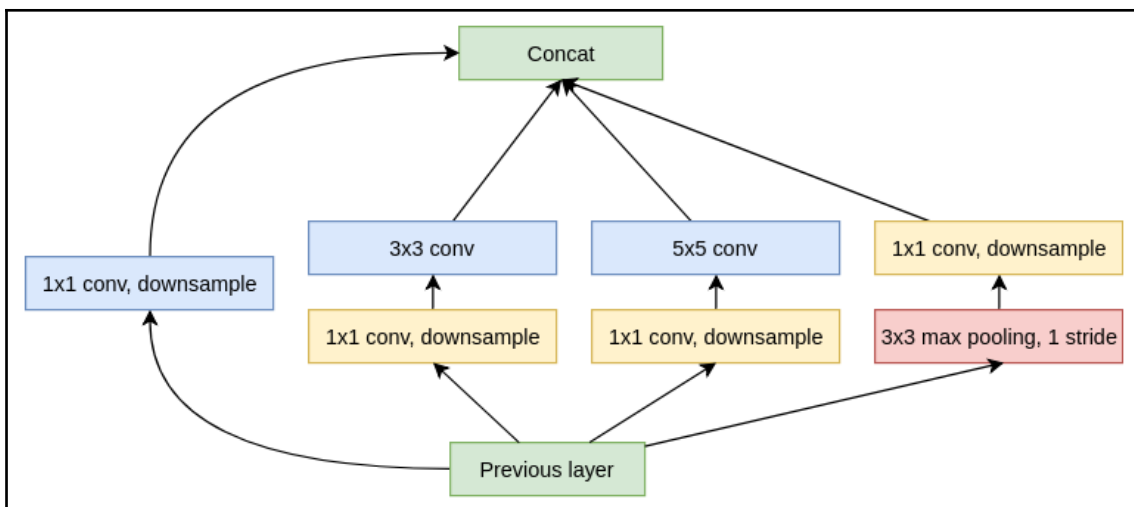
Chapter 5: Advanced Computer Vision

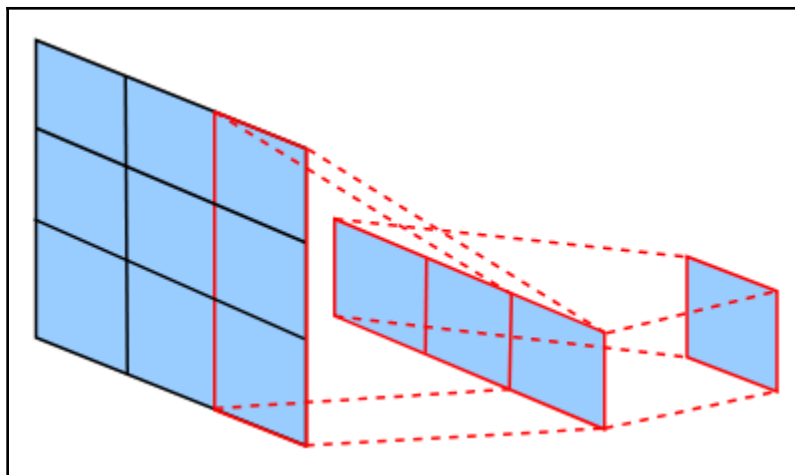


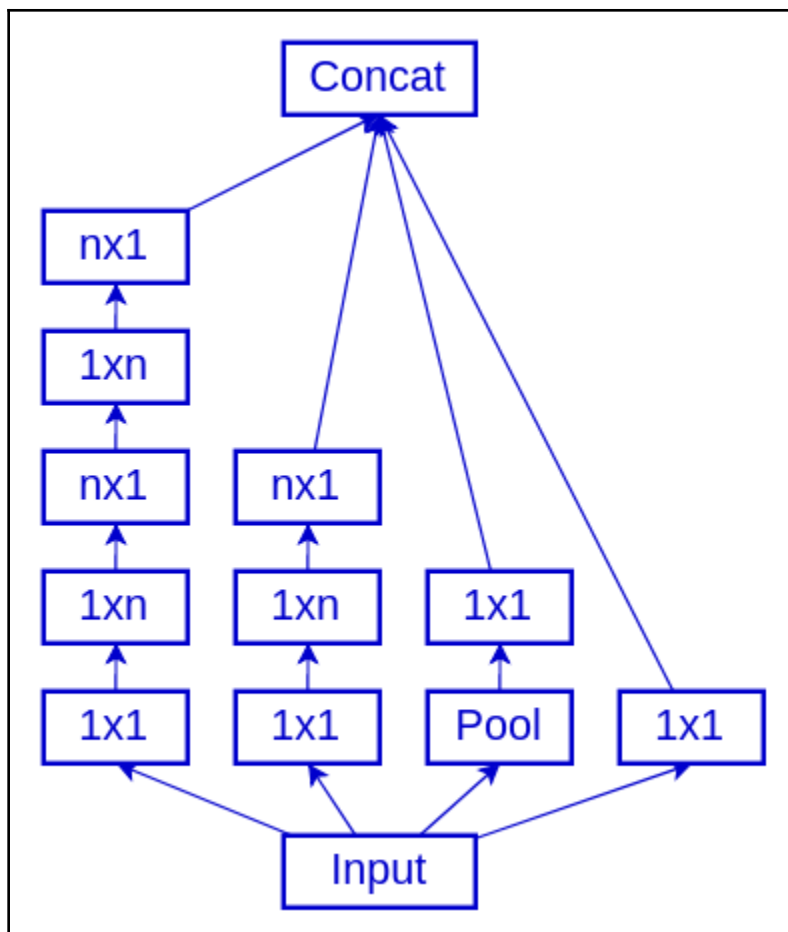
| VGG16 | VGG19 |
|---------------|---------------|
| conv 3x3, 64 | conv 3x3, 64 |
| conv 3x3, 64 | conv 3x3, 64 |
| max pool | |
| conv 3x3, 128 | conv 3x3, 128 |
| conv 3x3, 128 | conv 3x3, 128 |
| max pool | |
| conv 3x3, 256 | conv 3x3, 256 |
| conv 3x3, 256 | conv 3x3, 256 |
| conv 3x3, 256 | conv 3x3, 256 |
| | conv 3x3, 256 |
| max pool | |
| conv 3x3, 512 | conv 3x3, 512 |
| conv 3x3, 512 | conv 3x3, 512 |
| conv 3x3, 512 | conv 3x3, 512 |
| | conv 3x3, 512 |
| max pool | |
| conv 3x3, 512 | conv 3x3, 512 |
| conv 3x3, 512 | conv 3x3, 512 |
| conv 3x3, 512 | conv 3x3, 512 |
| | conv 3x3, 512 |
| max pool | |
| fc-4096 | |
| fc-4096 | |
| fc-1000 | |
| softmax | |

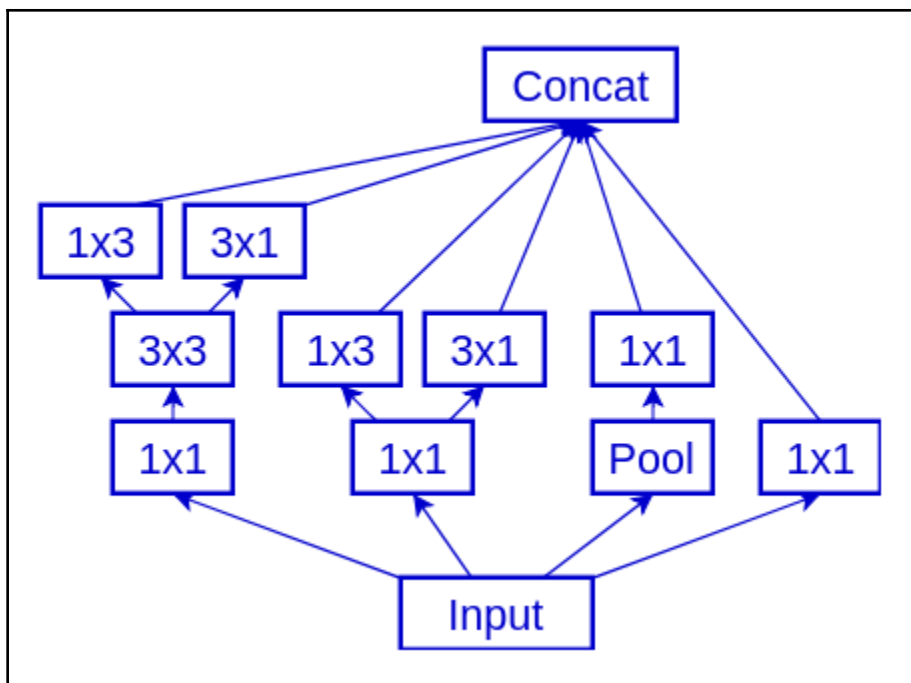


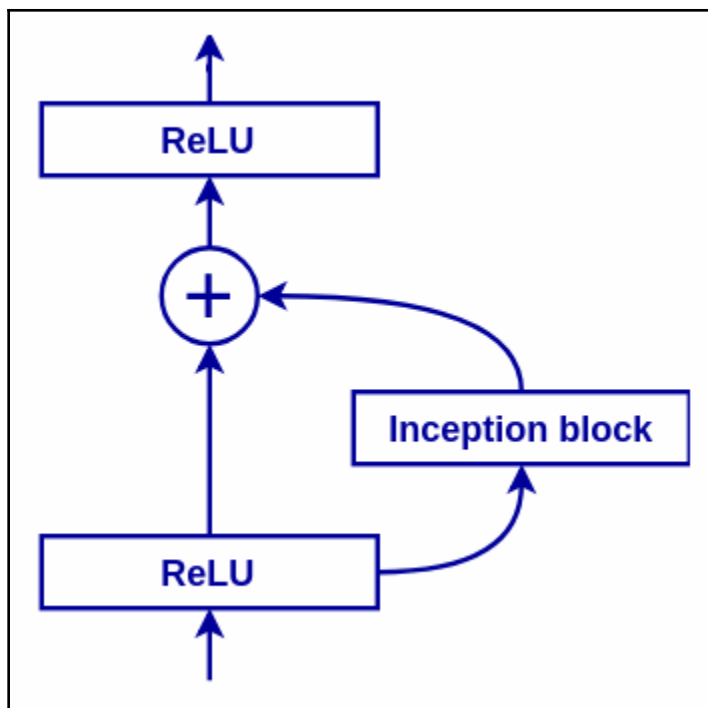
| output size | 18-layer | 34-layer | 50-layer | 101-layer | 152-layer |
|-------------|-------------------------------------|-------------------------------------|---|--|--|
| 112x112 | 7x7 conv, stride 2 | | | | |
| 56x56 | 3x3 max pool, stride 2 | | | | |
| | <div>3x3, 64 3x3, 64</div> x2 | <div>3x3, 64 3x3, 64</div> x3 | <div>1x1, 64 3x3, 64 1x1, 256</div> x3 | <div>1x1, 64 3x3, 64 1x1, 256</div> x3 | <div>1x1, 64 3x3, 64 1x1, 256</div> x3 |
| 28x28 | <div>3x3, 128 3x3, 128</div> x2 | <div>3x3, 128 3x3, 128</div> x4 | <div>1x1, 128 3x3, 128 1x1, 512</div> x4 | <div>1x1, 128 3x3, 128 1x1, 512</div> x4 | <div>1x1, 128 3x3, 128 1x1, 512</div> x8 |
| 14x14 | <div>3x3, 256 3x3, 256</div> x2 | <div>3x3, 256 3x3, 256</div> x6 | <div>1x1, 256 3x3, 256 1x1, 1024</div> x6 | <div>1x1, 256 3x3, 256 1x1, 1024</div> x23 | <div>1x1, 256 3x3, 256 1x1, 1024</div> x36 |
| 7x7 | <div>3x3, 512 3x3, 512</div> x2 | <div>3x3, 512 3x3, 512</div> x3 | <div>1x1, 512 3x3, 512 1x1, 2048</div> x3 | <div>1x1, 512 3x3, 512 1x1, 2048</div> x3 | <div>1x1, 512 3x3, 512 1x1, 2048</div> x3 |
| 1x1 | average pool, 1000-d fc, softmax | | | | |

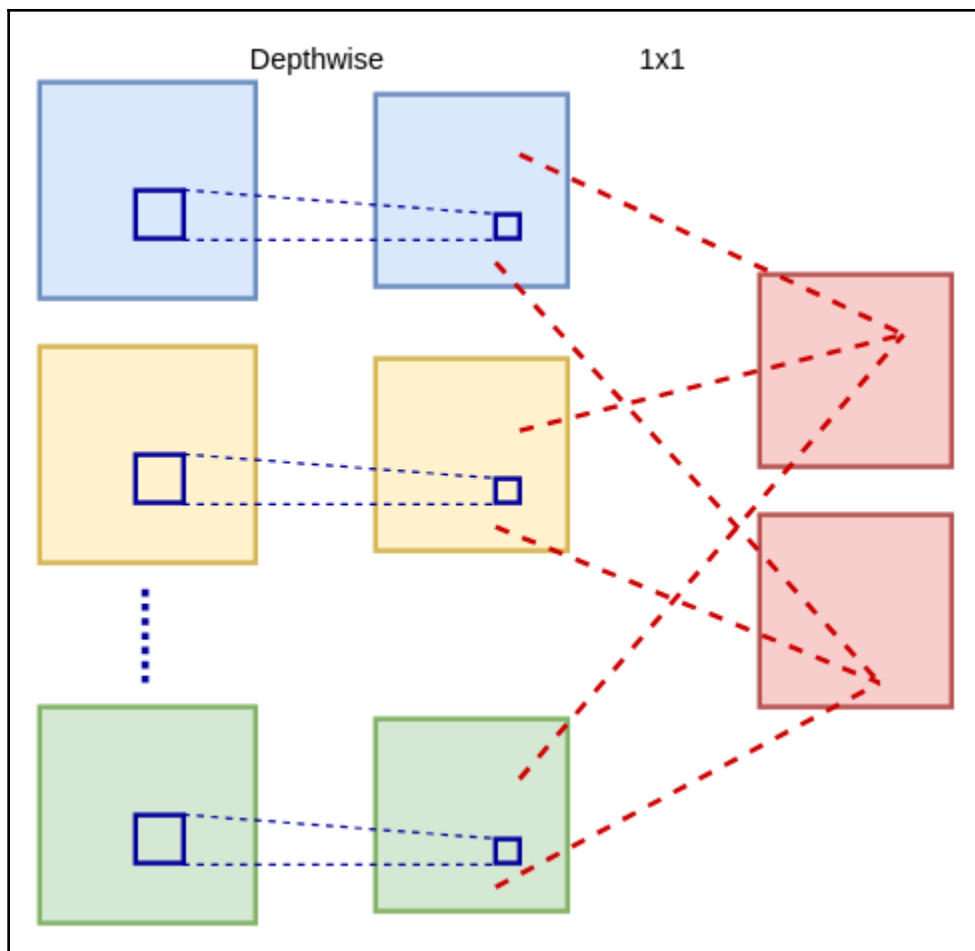


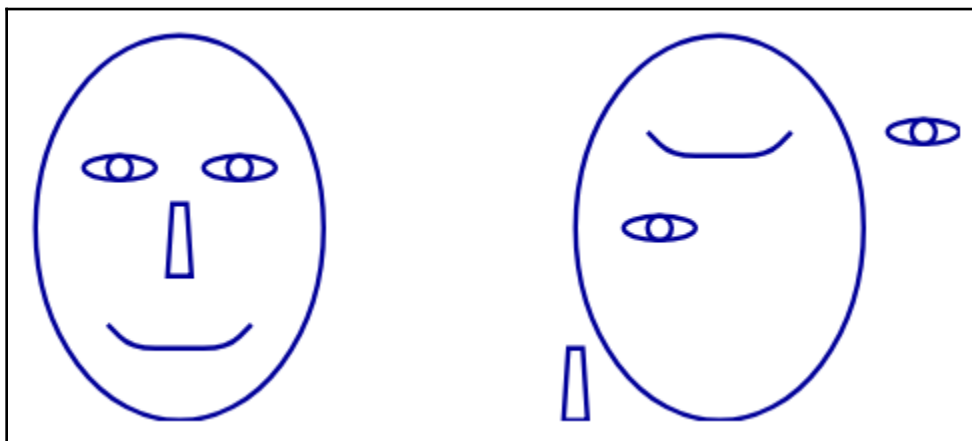
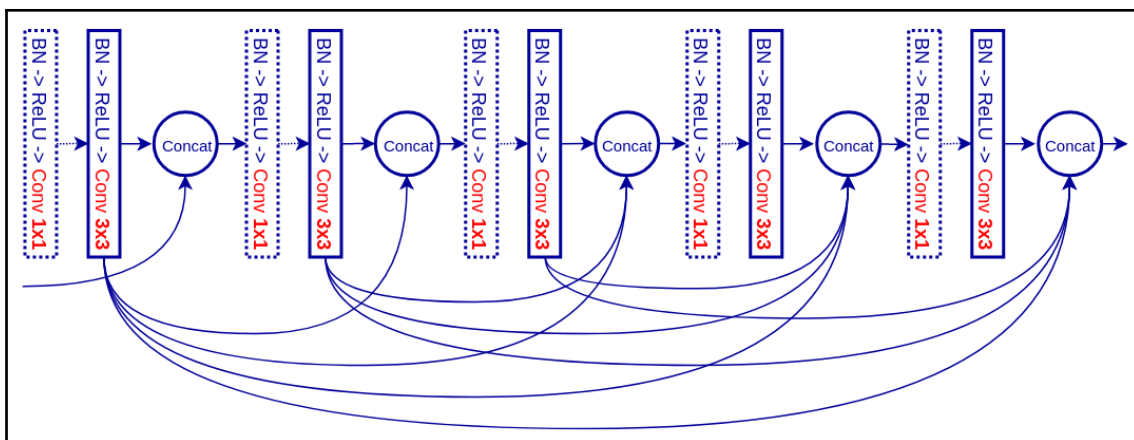


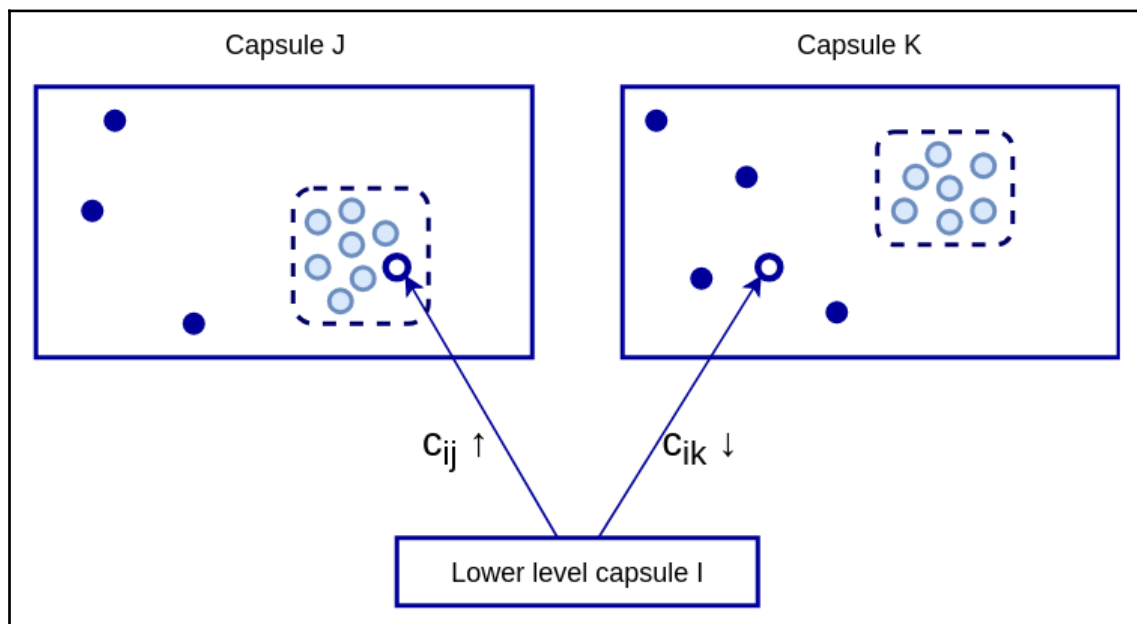
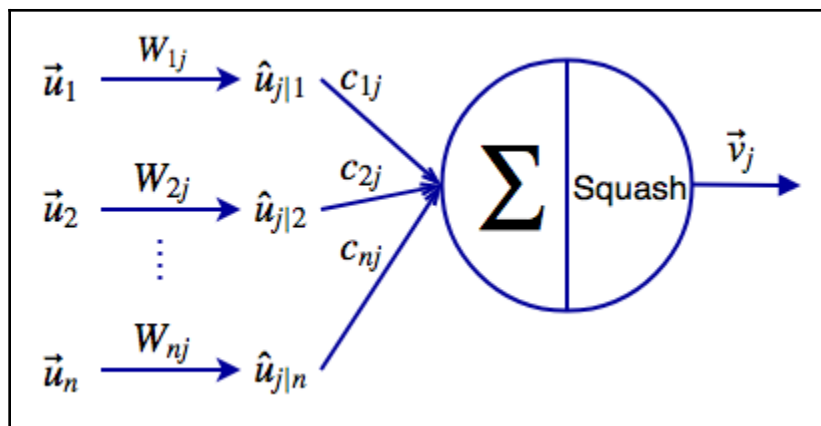




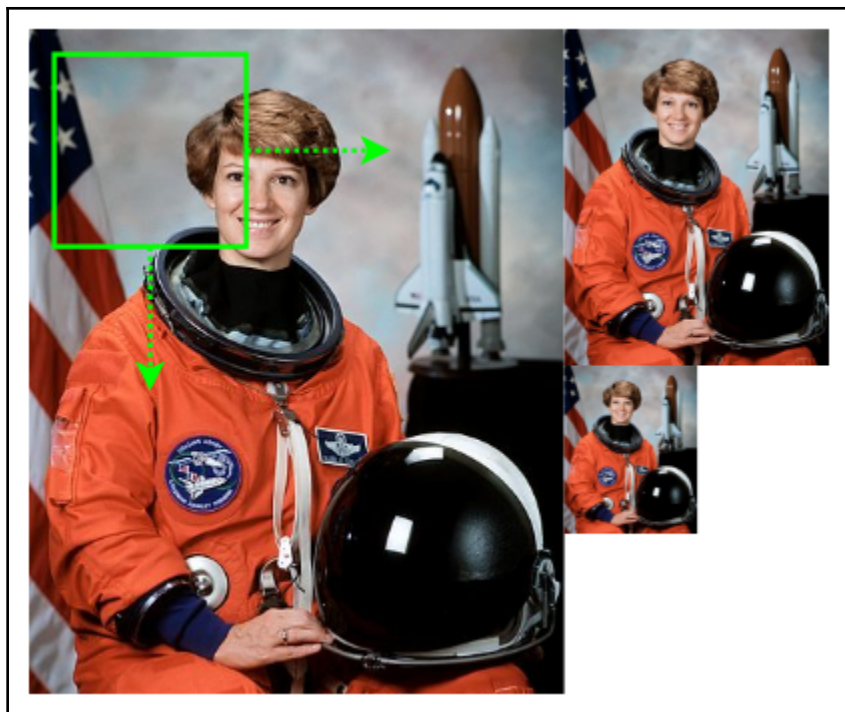


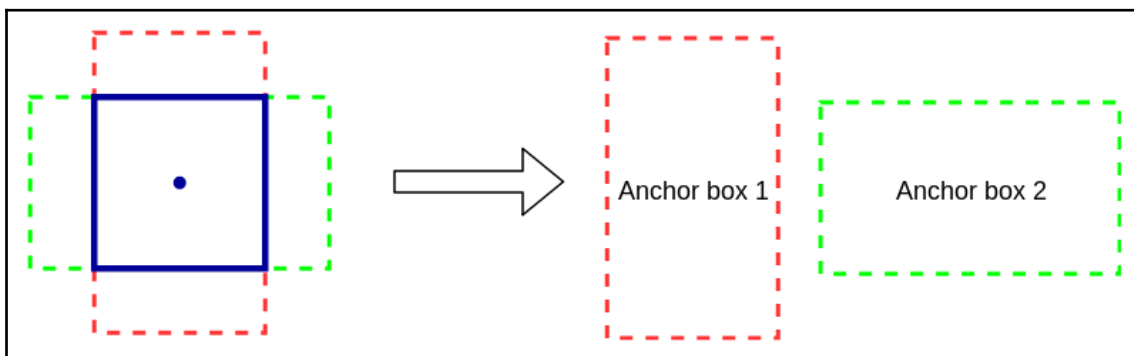
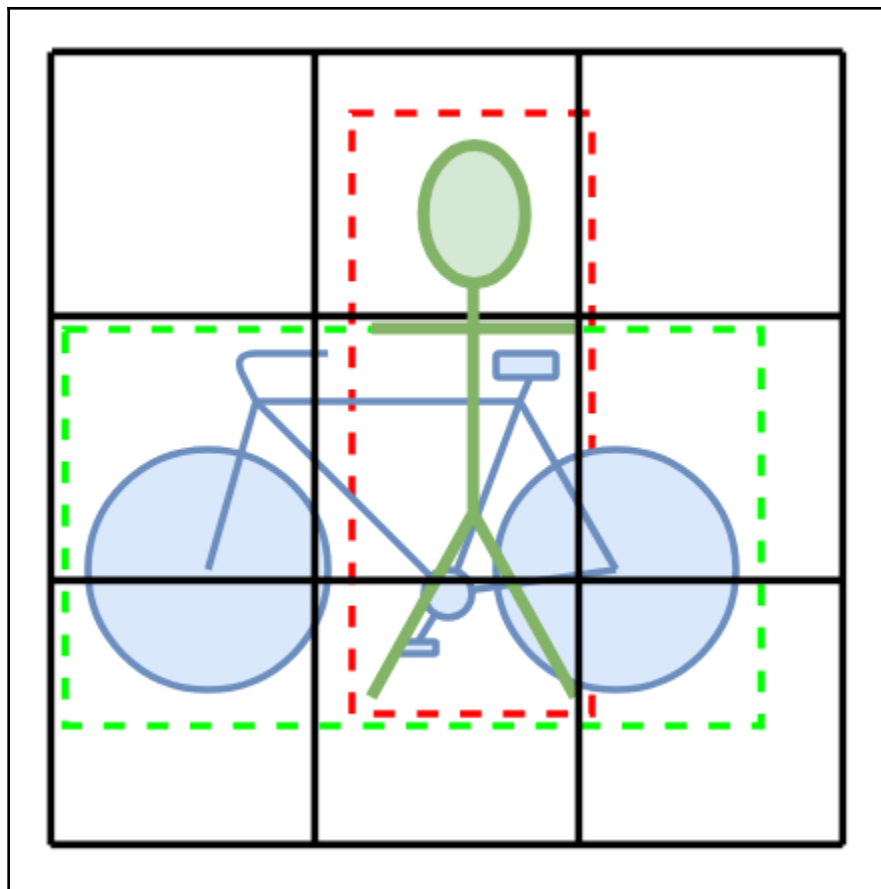


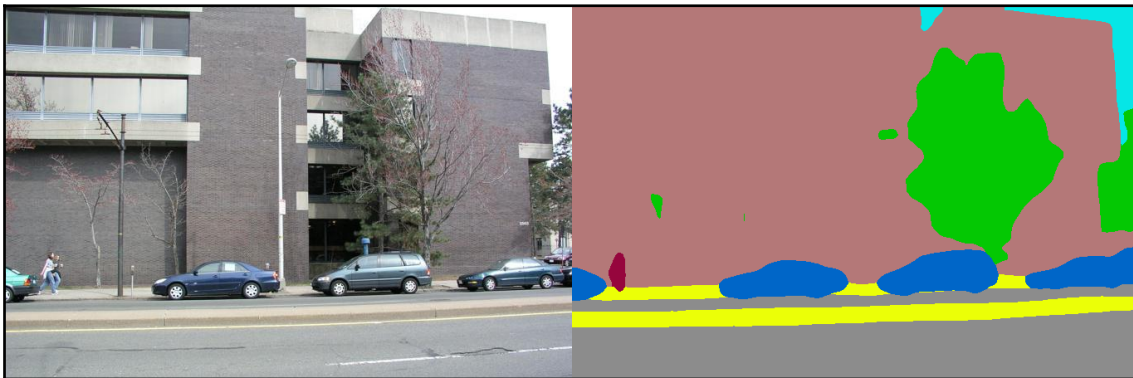
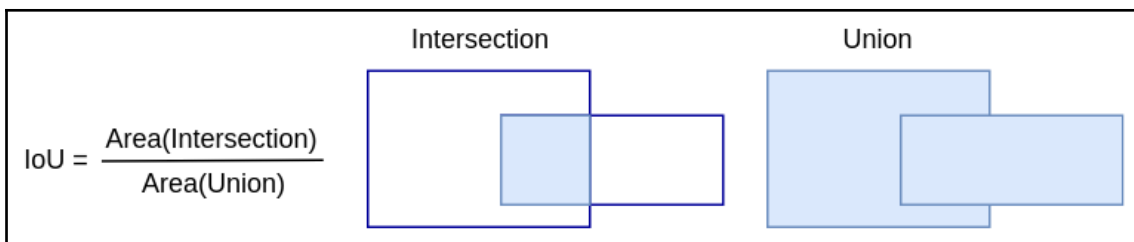




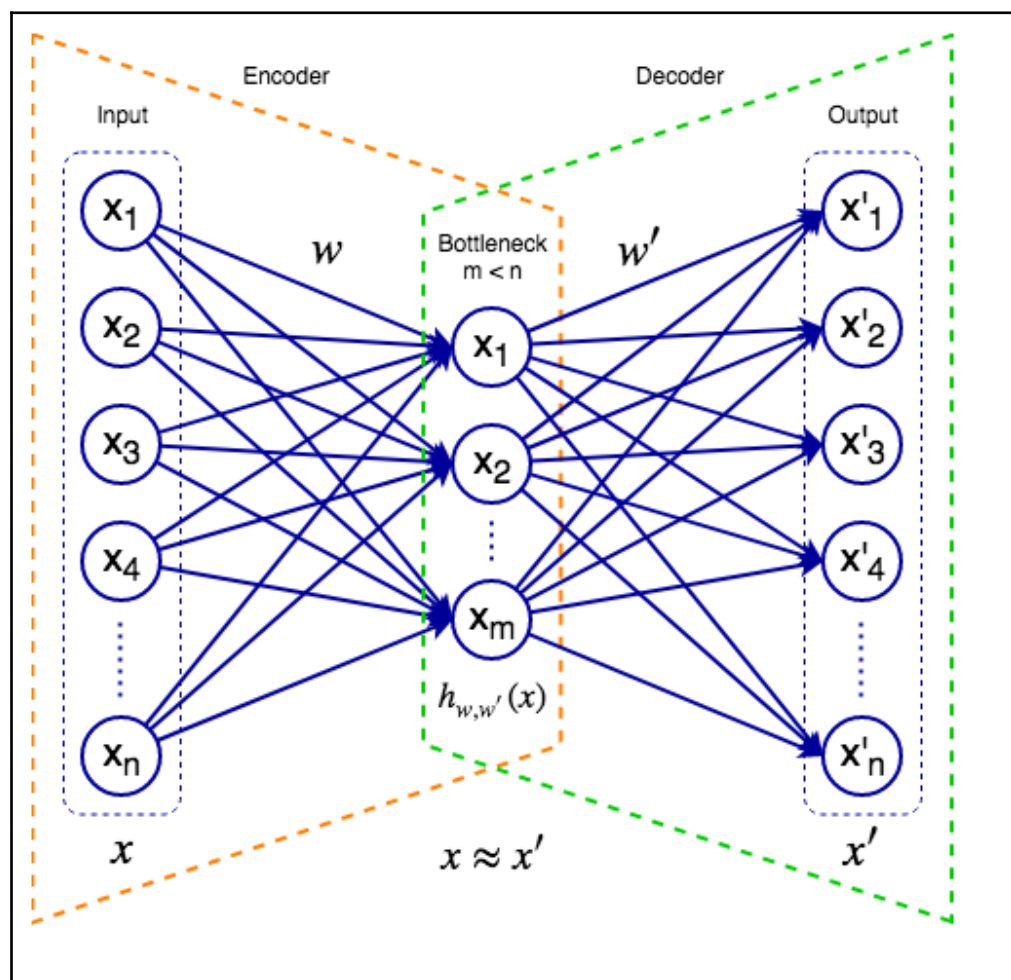


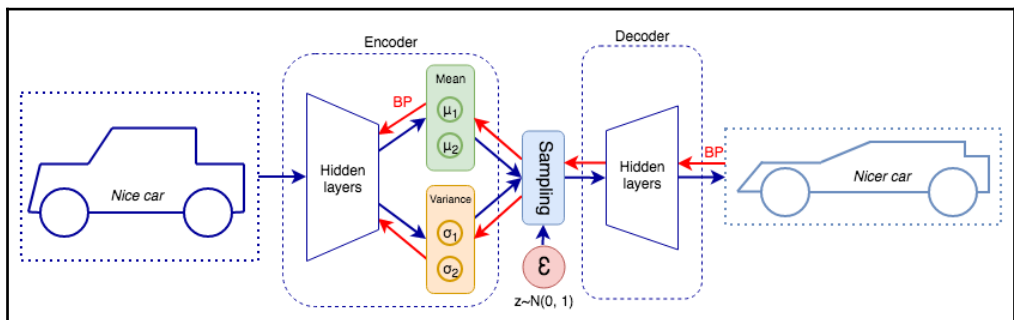
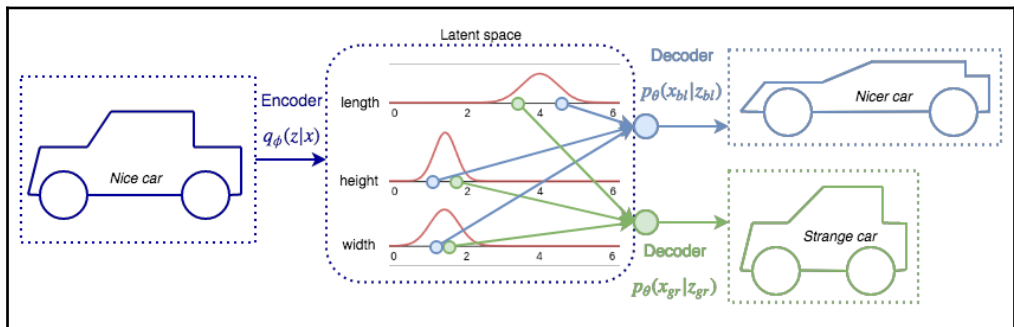
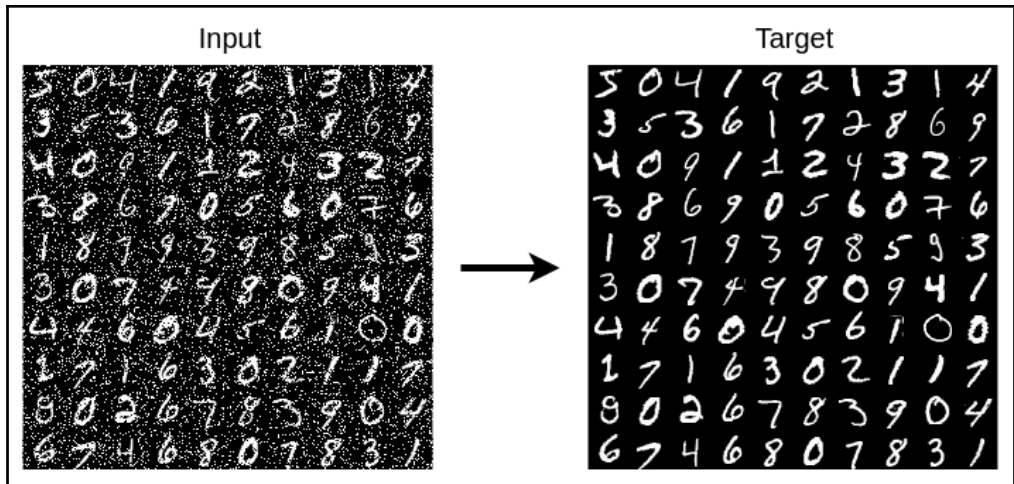


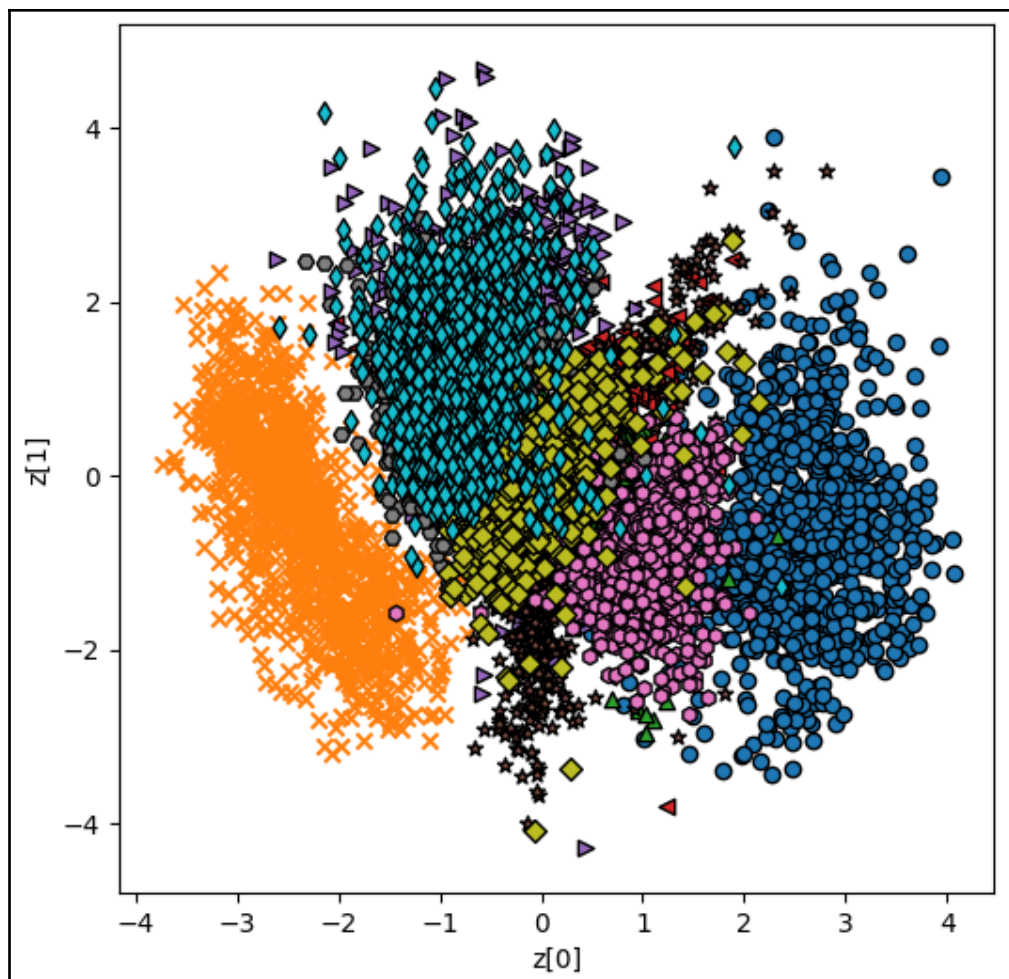


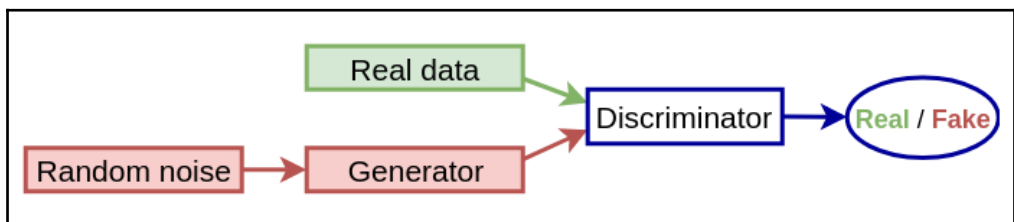
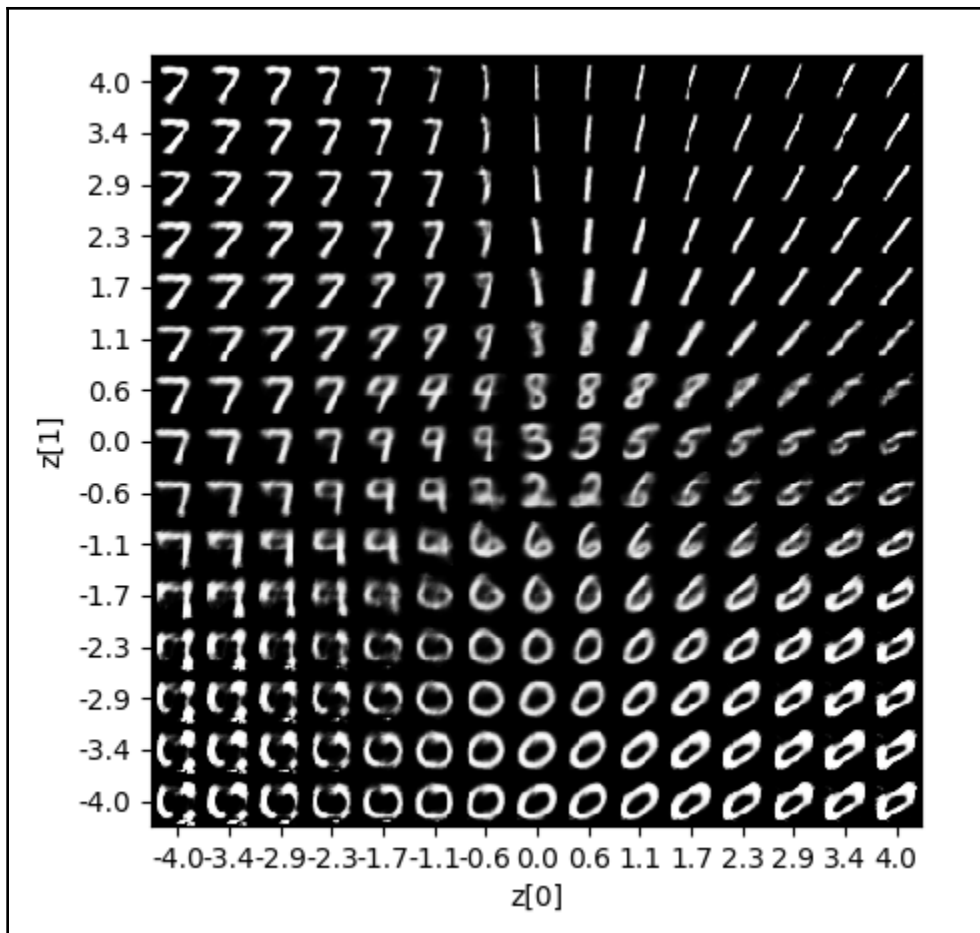


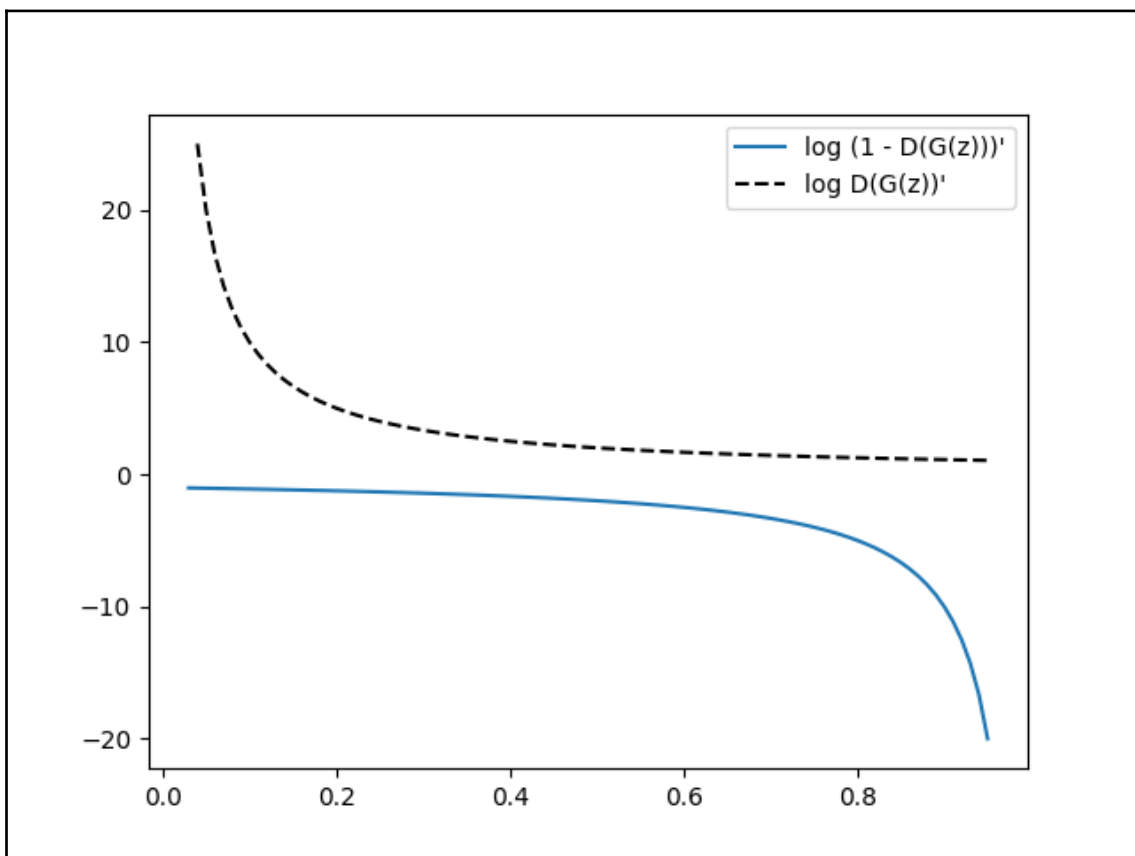
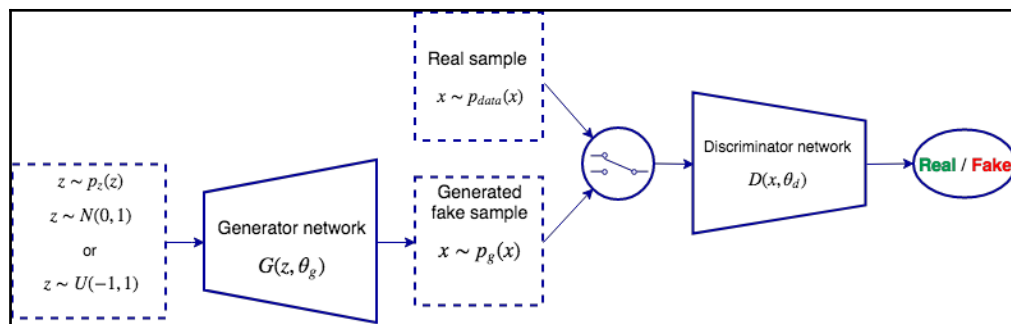
Chapter 6: Generating Images with GANs and VAEs

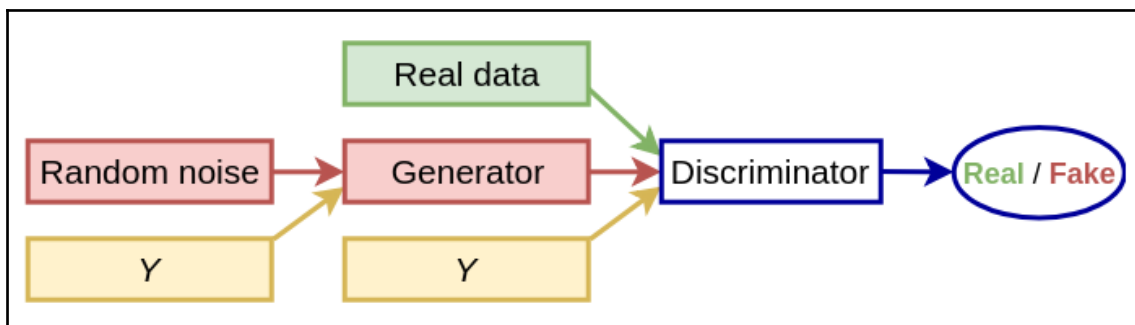
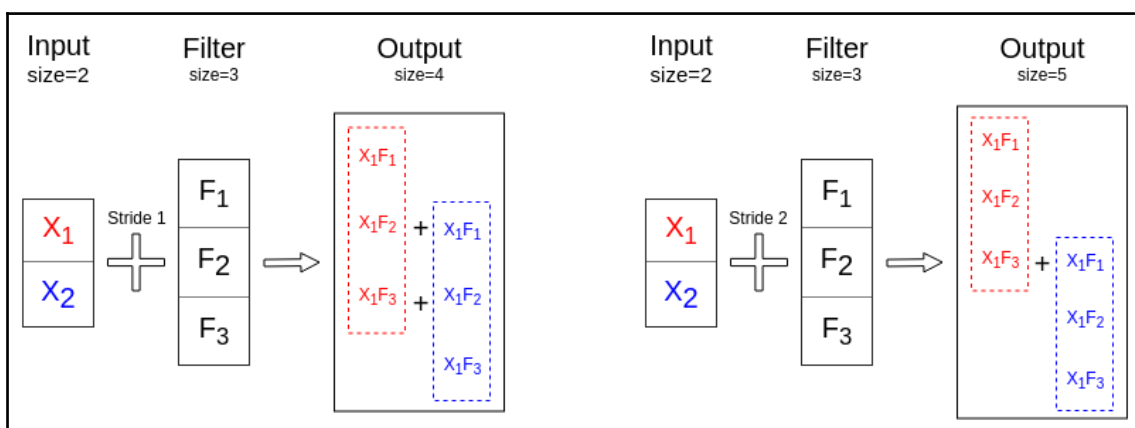
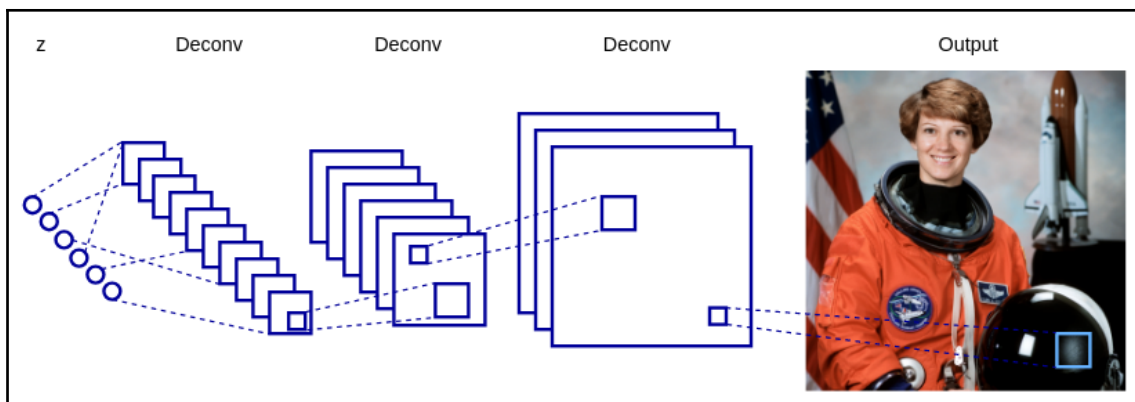






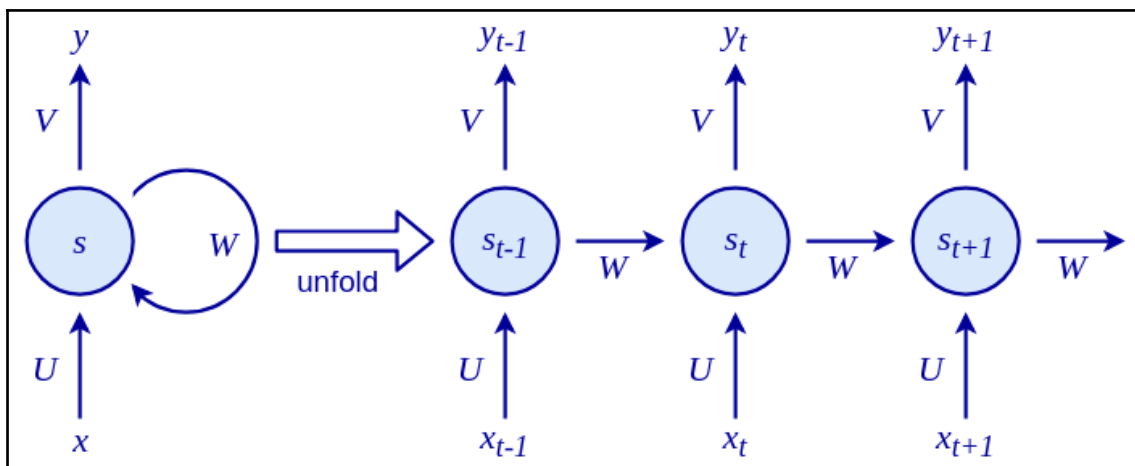


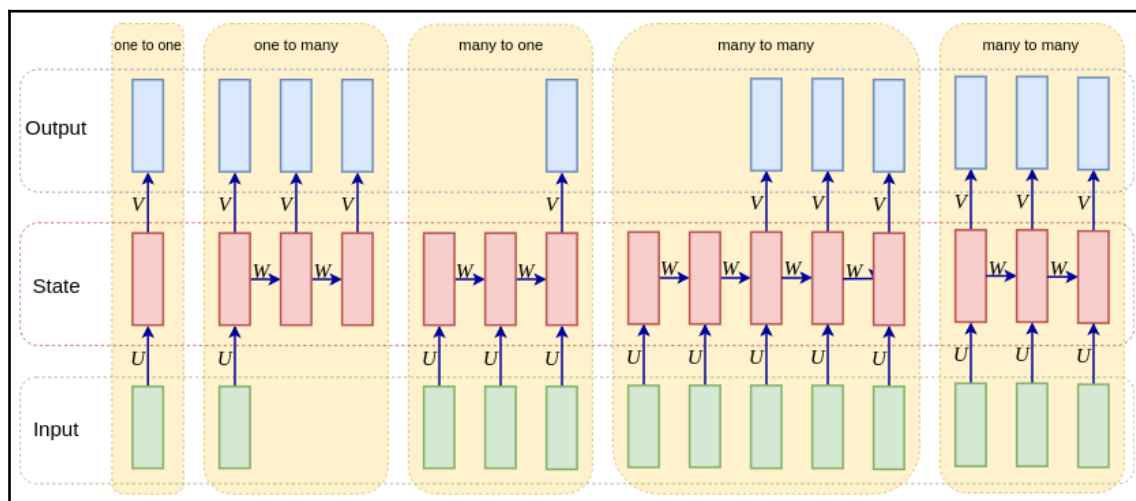
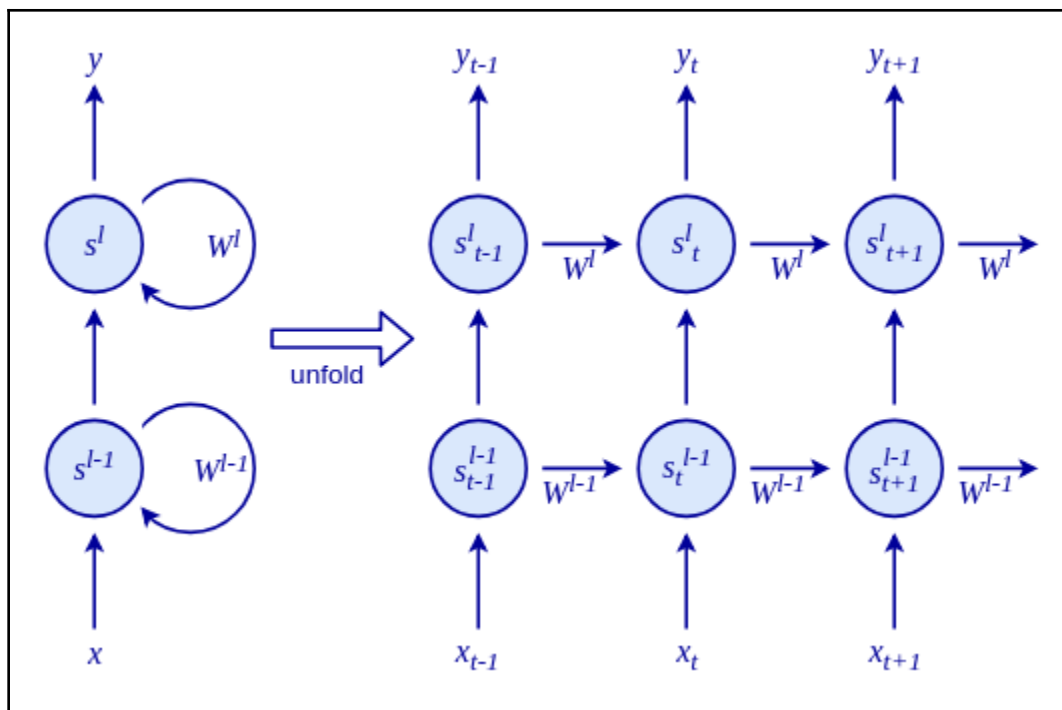


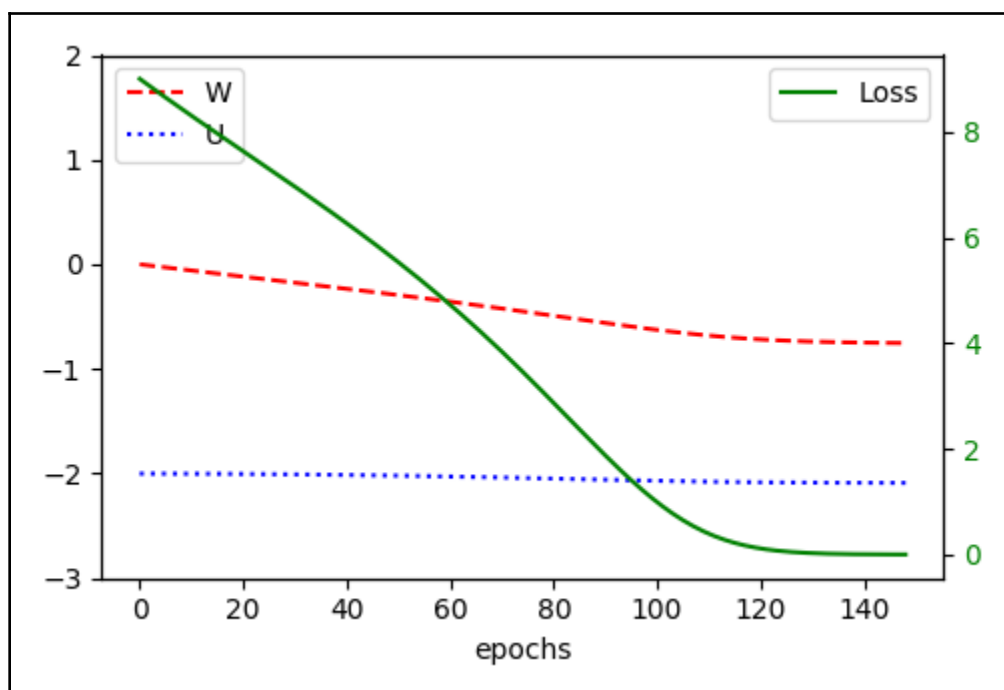
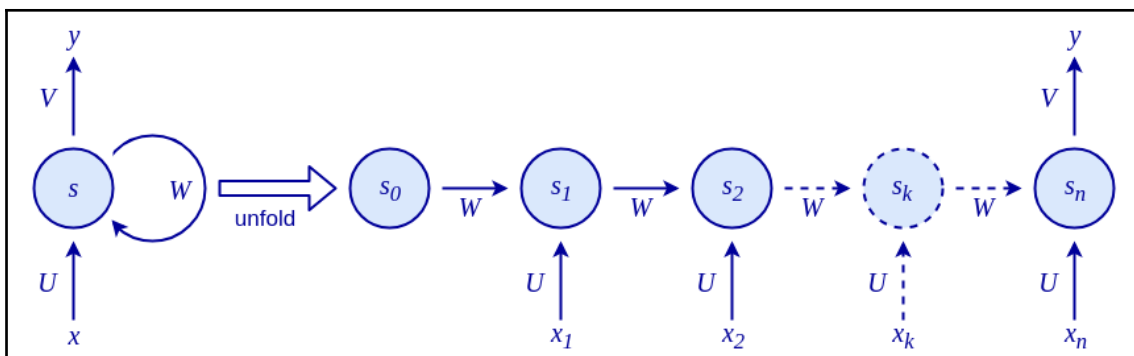


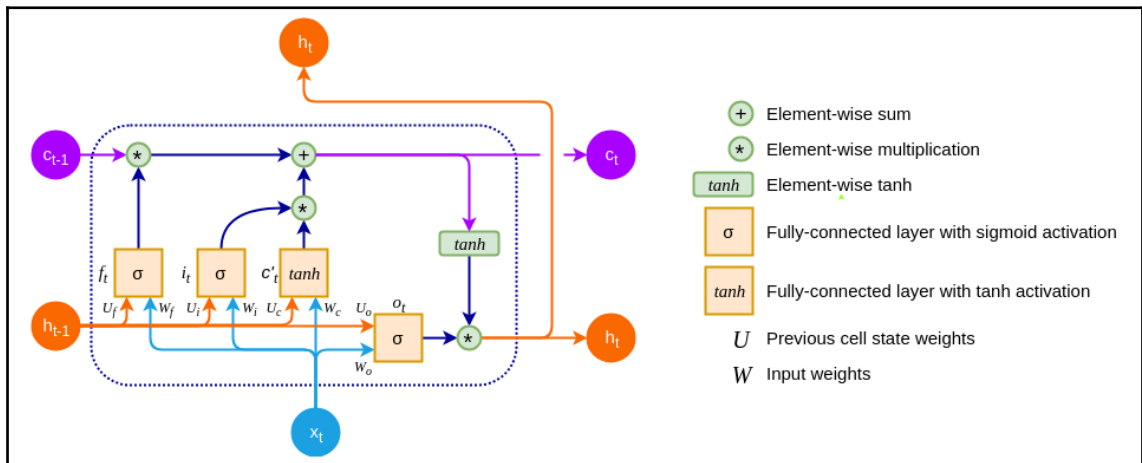
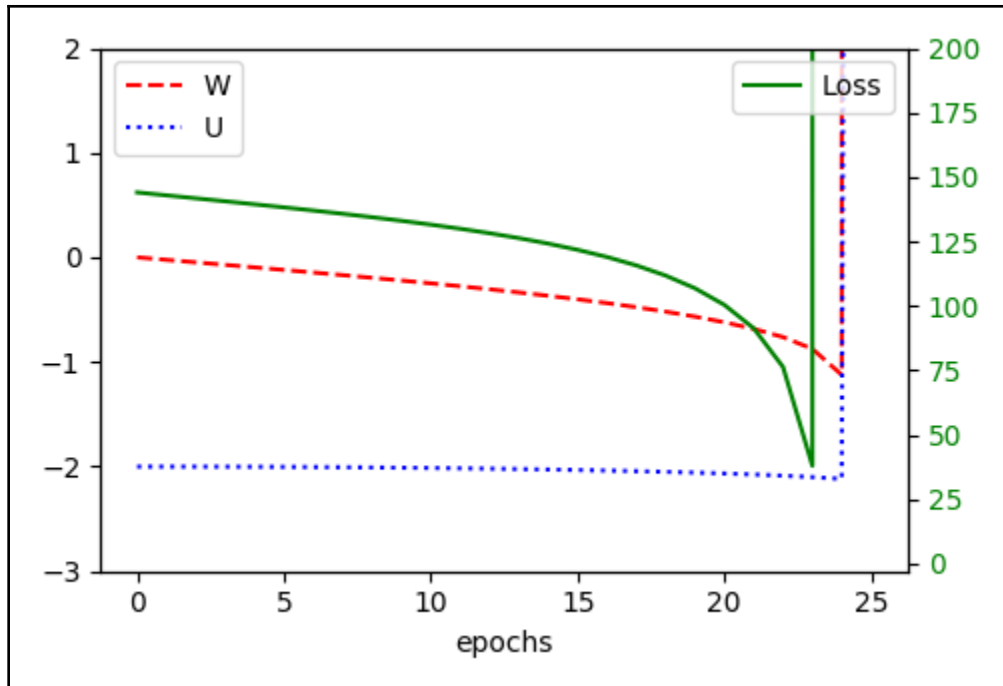


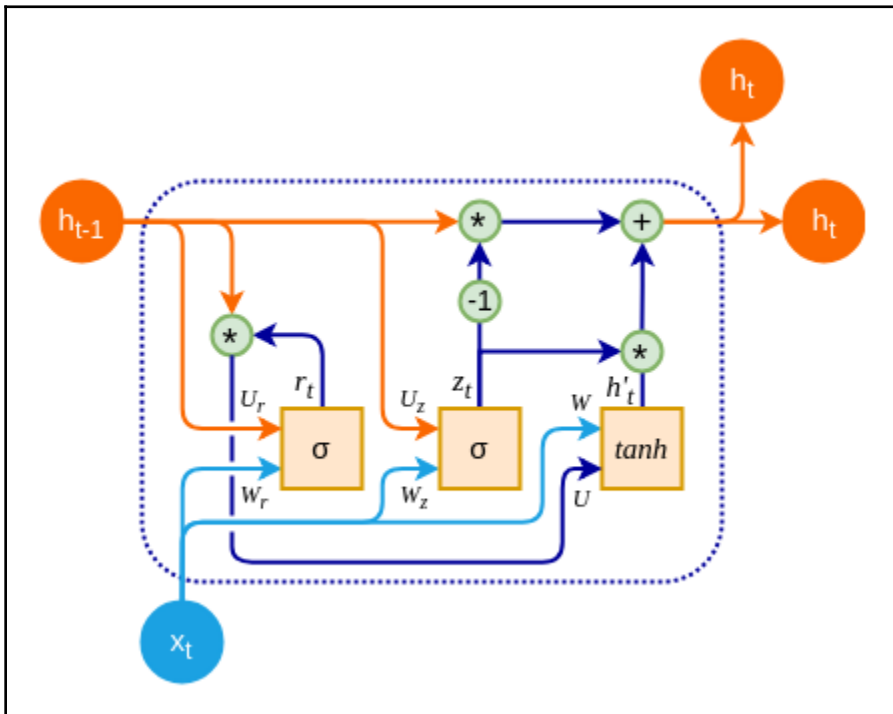
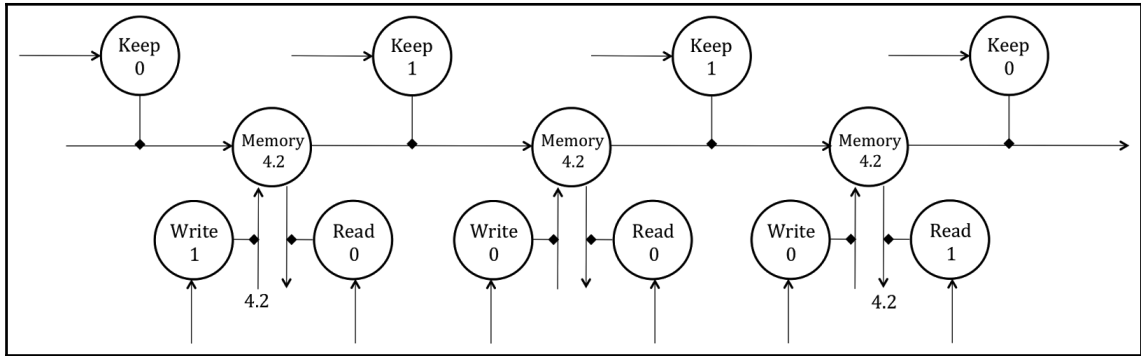
Chapter 7: Recurrent Neural Networks and Language Models

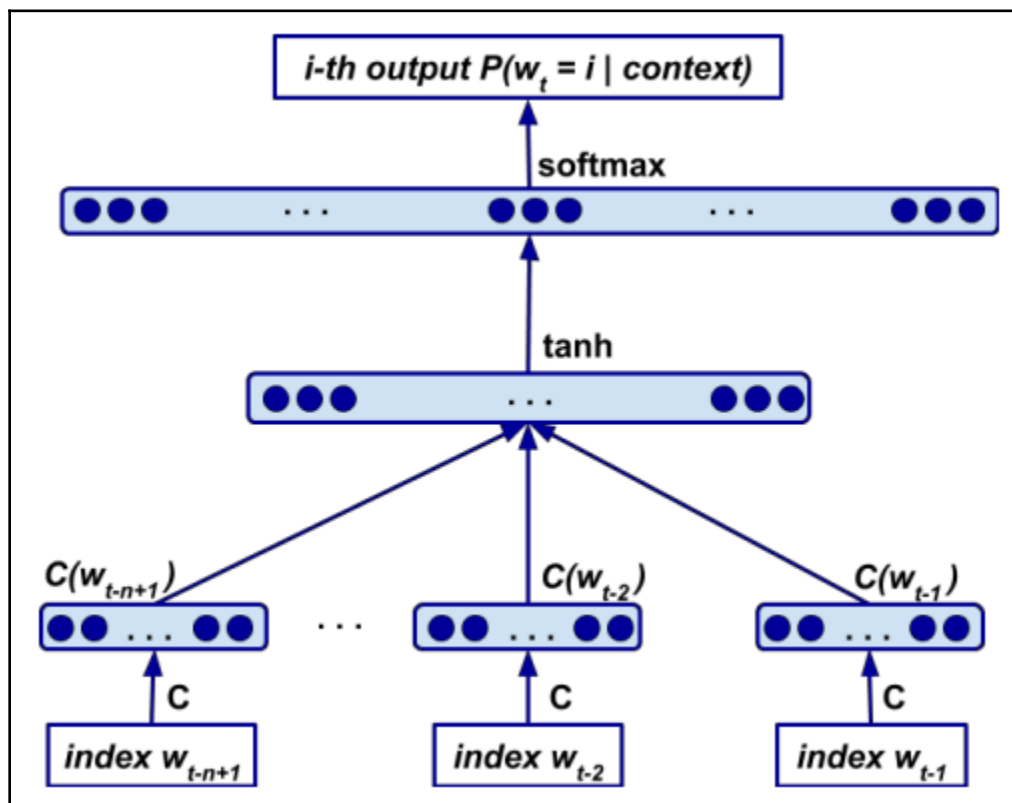
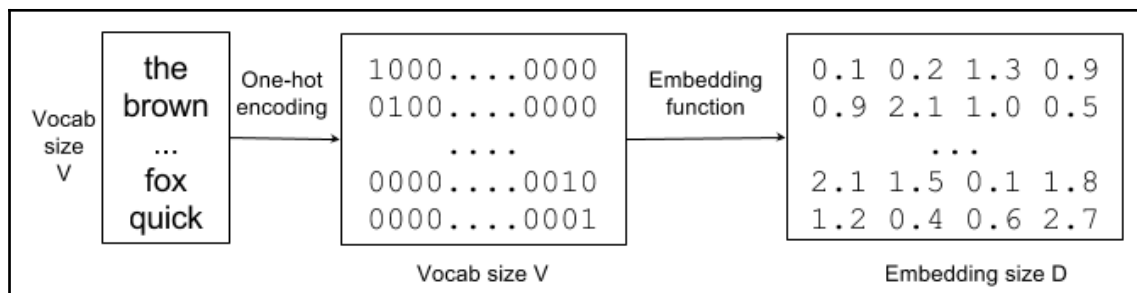


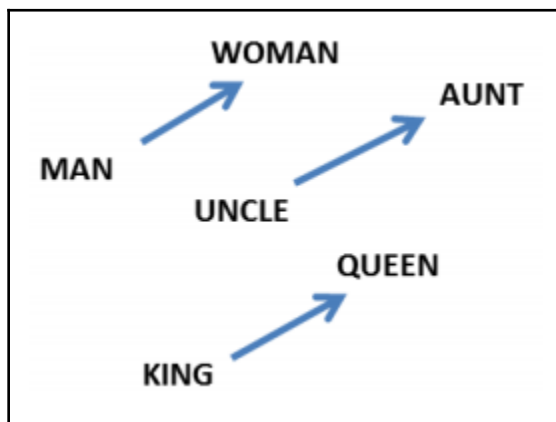
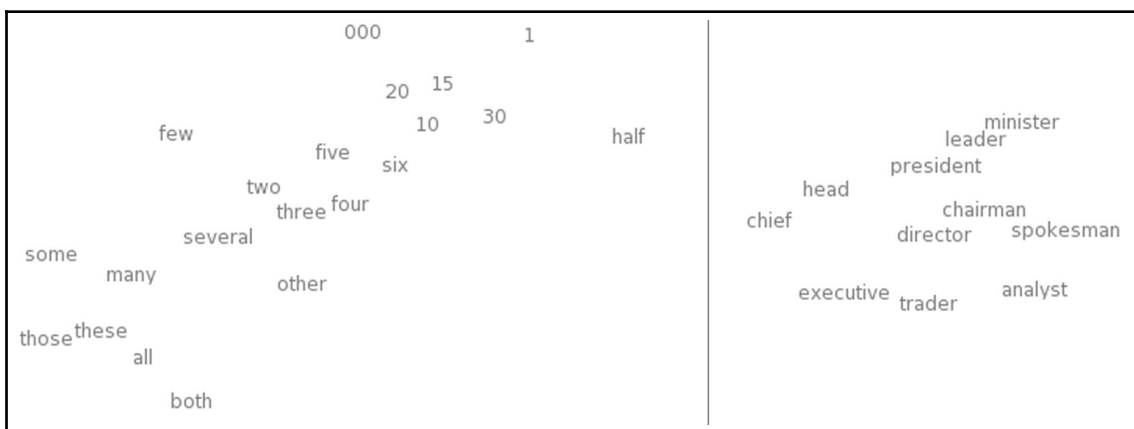
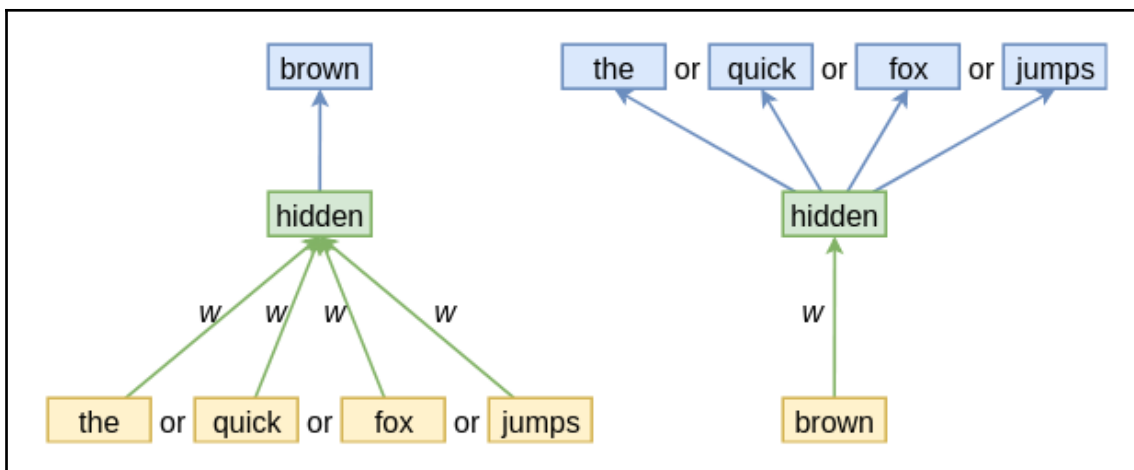


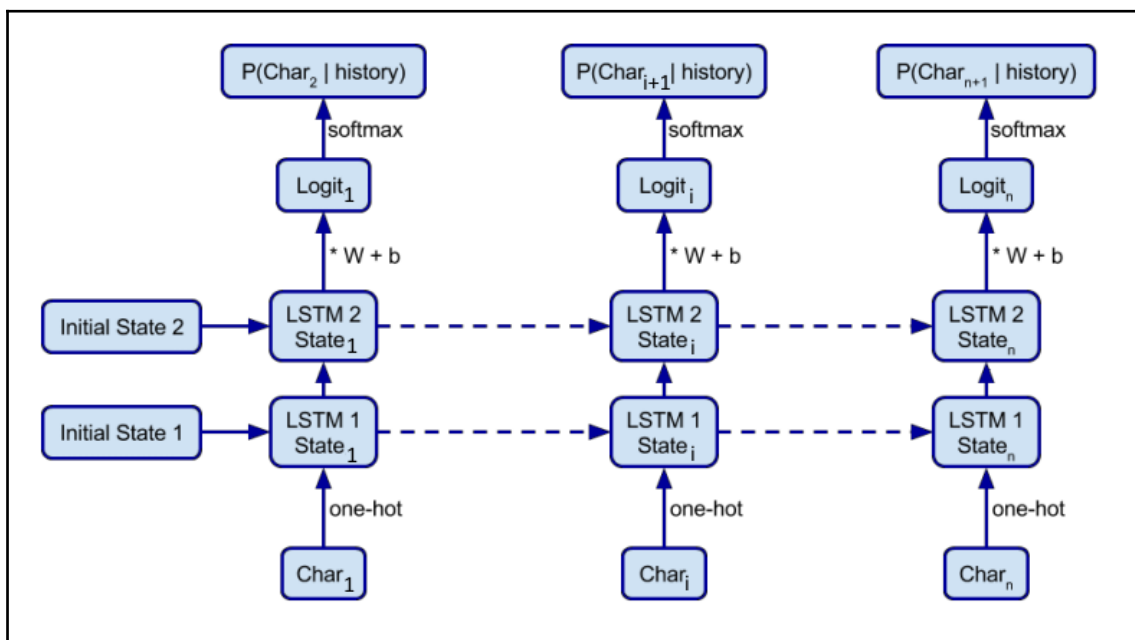
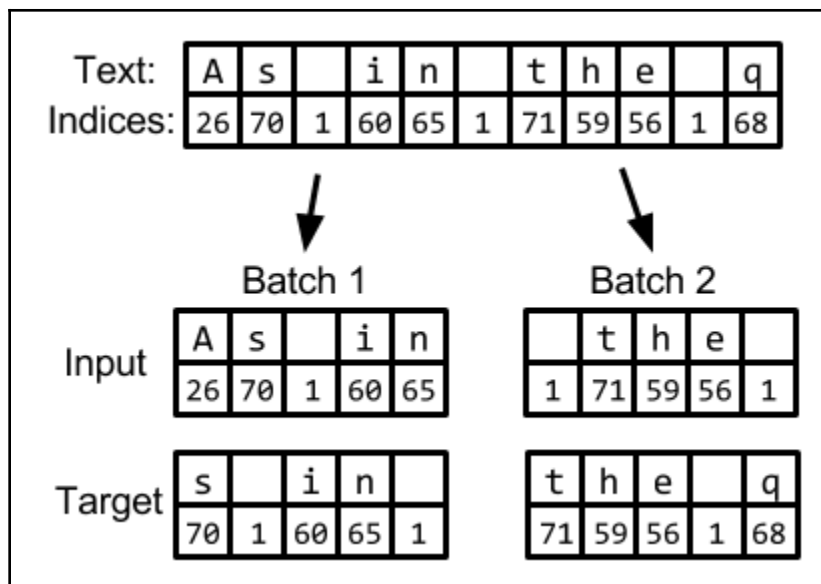


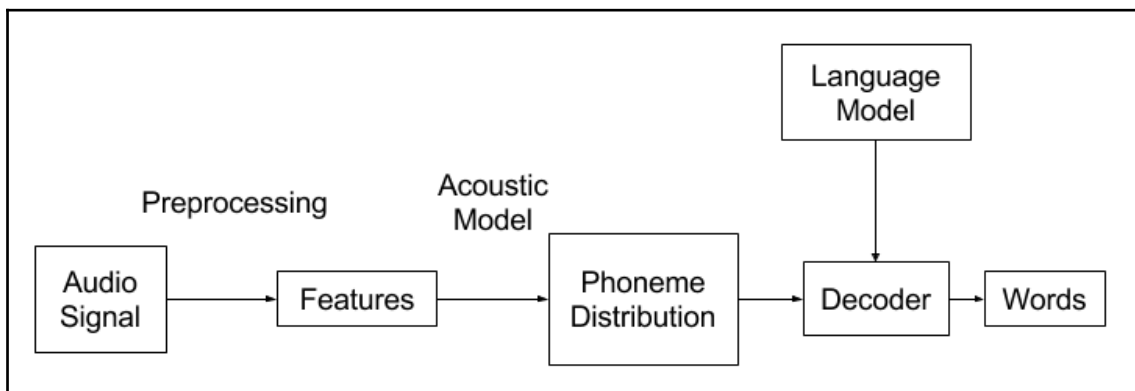
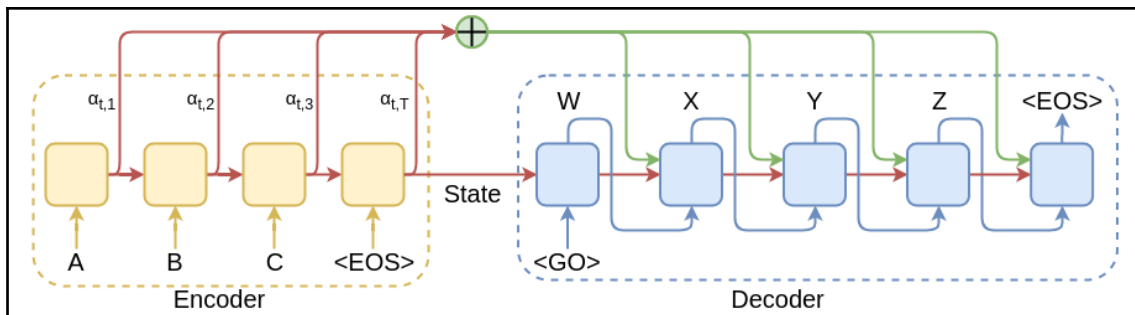
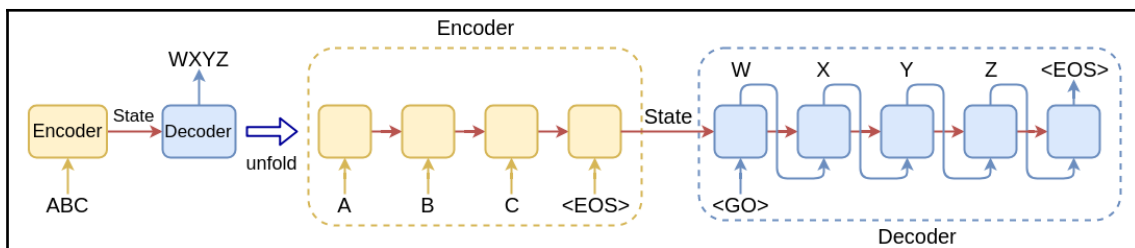


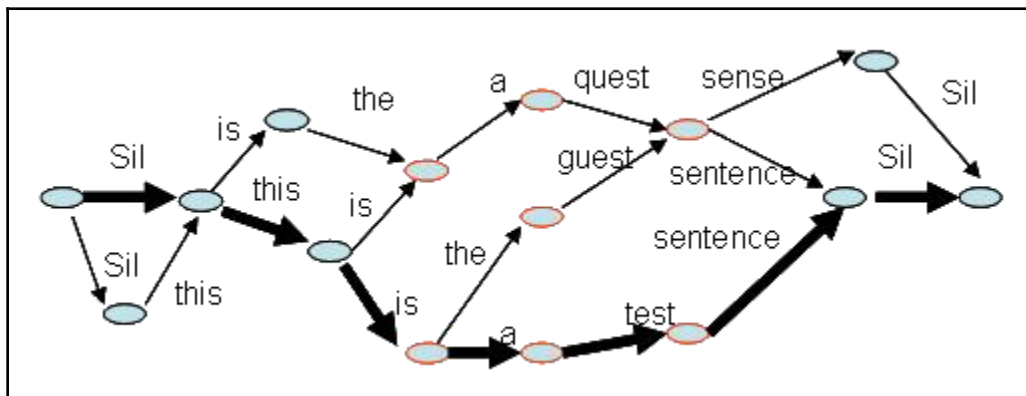
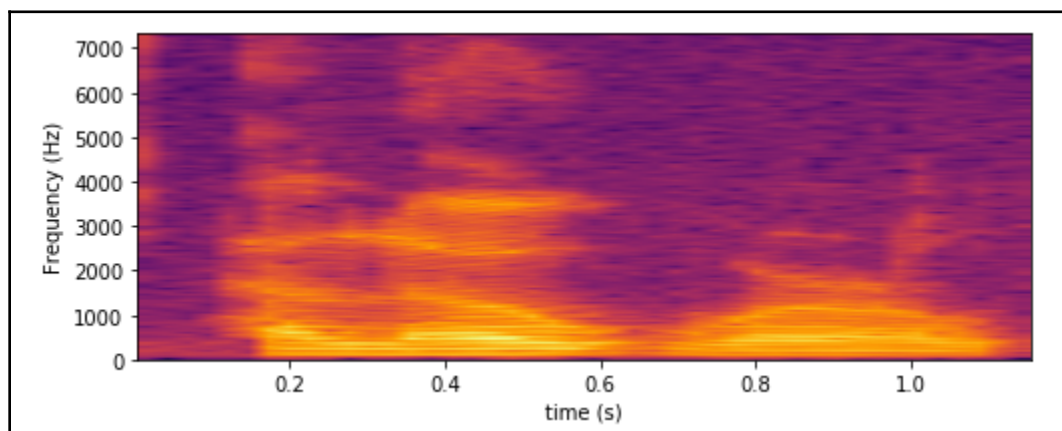
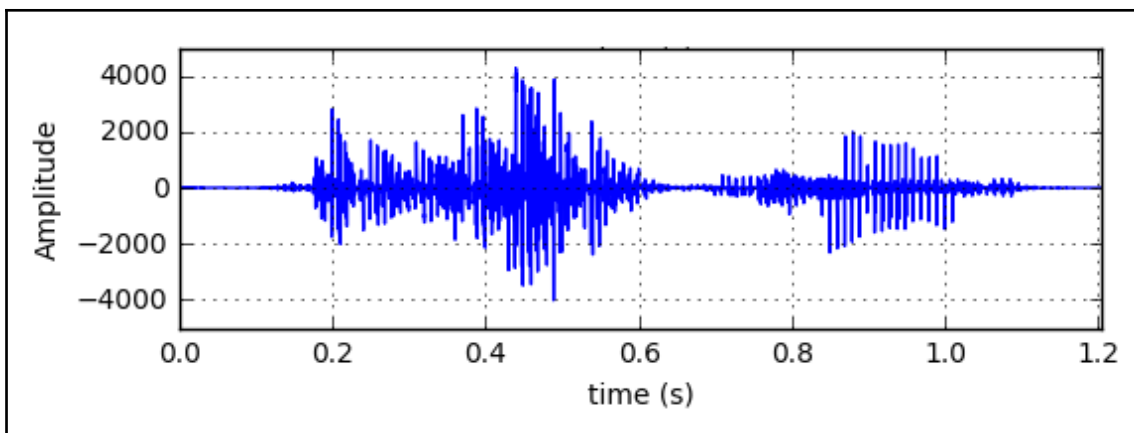




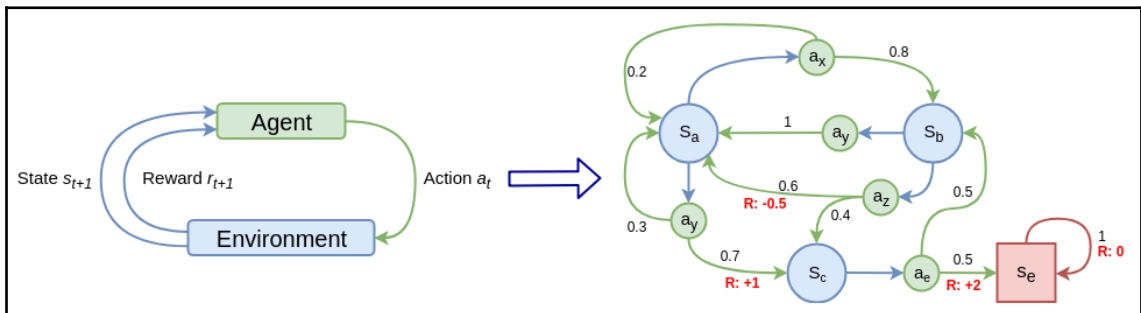
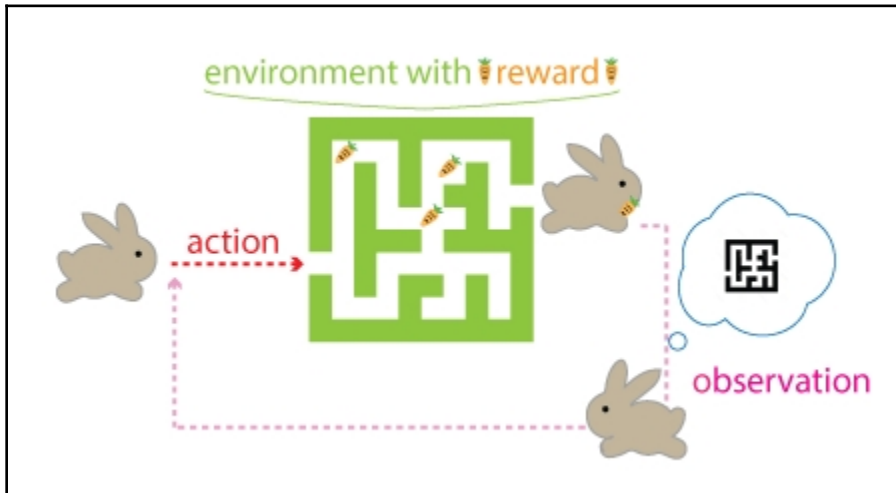


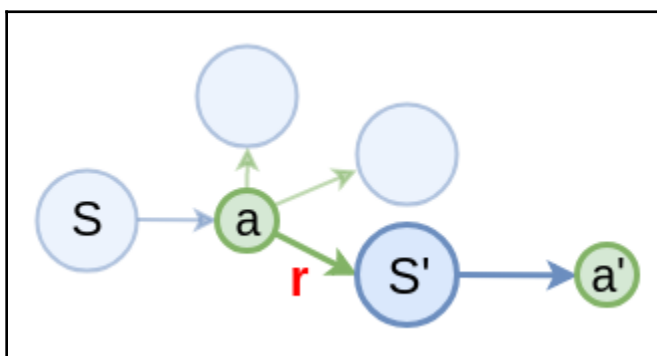
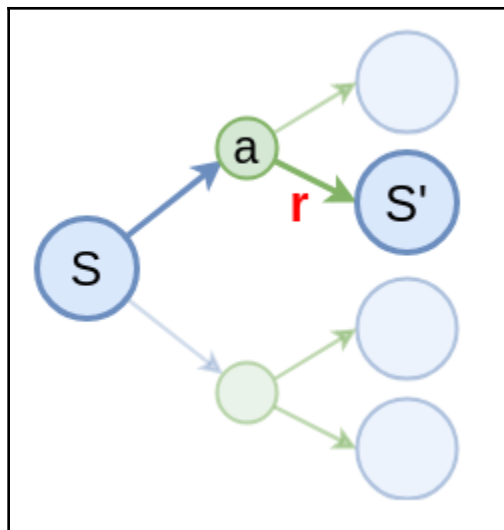


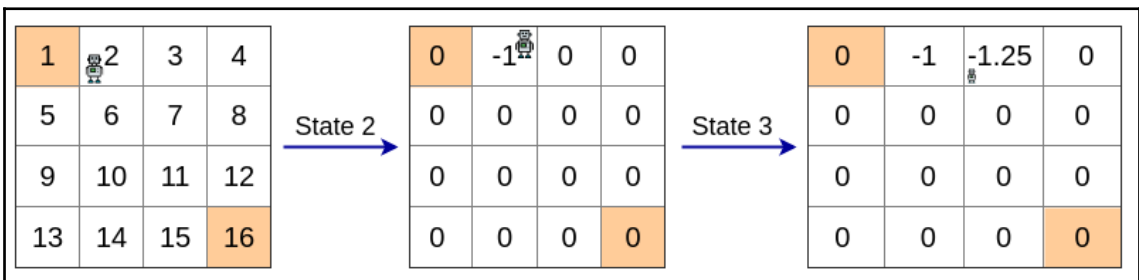
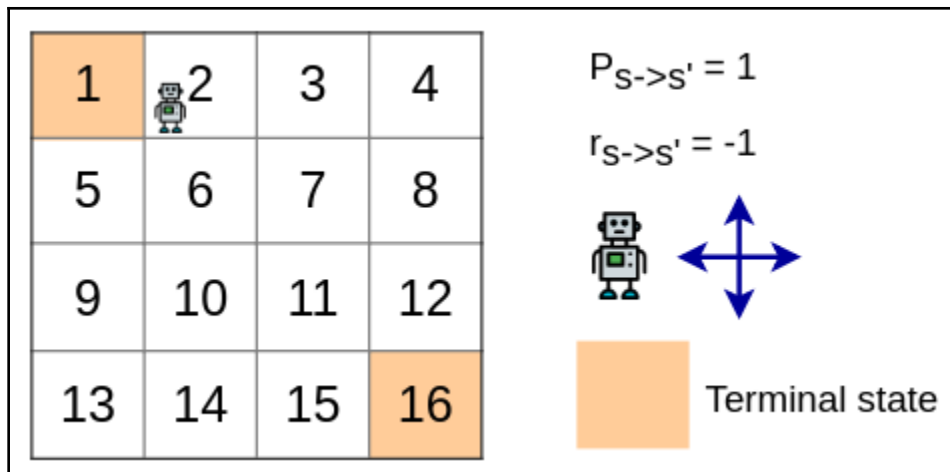




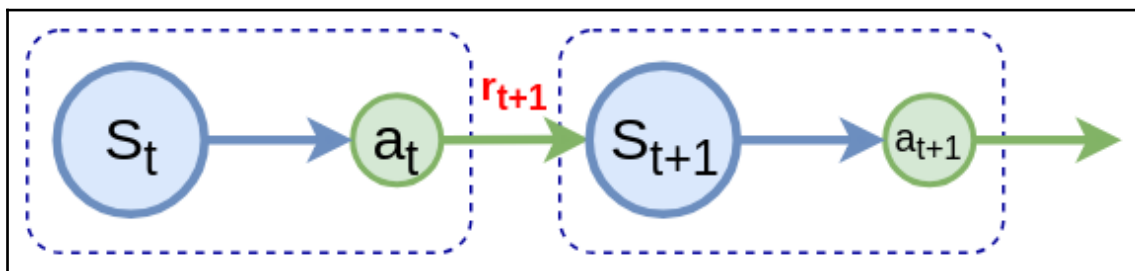
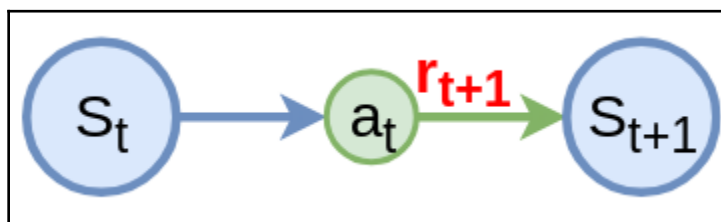
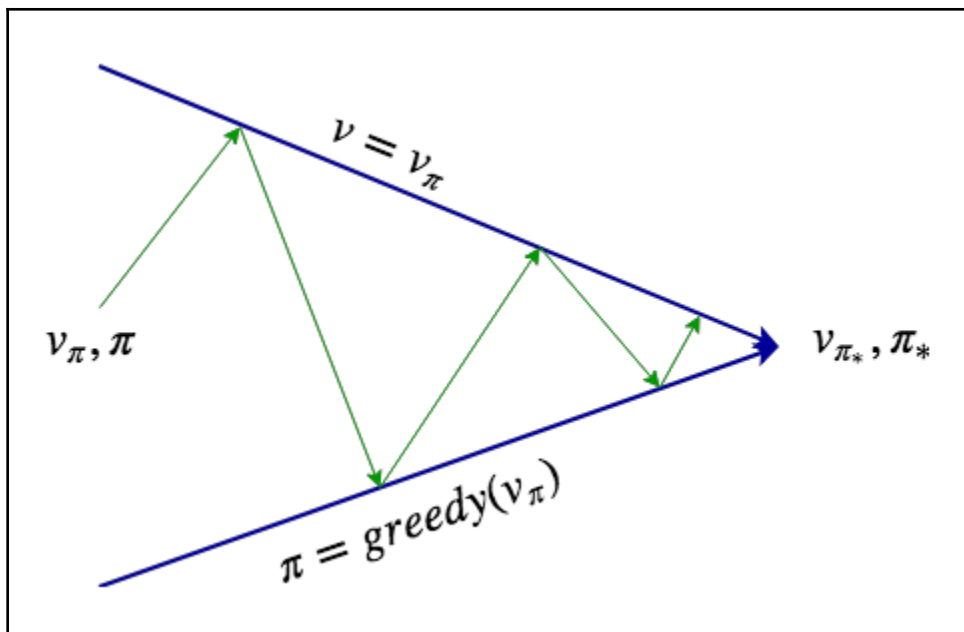
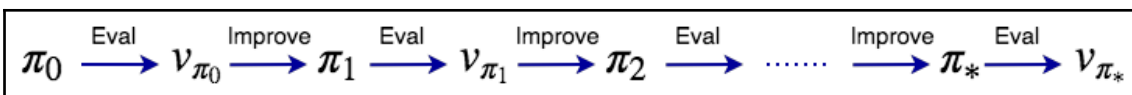
Chapter 8: Reinforcement Learning Theory

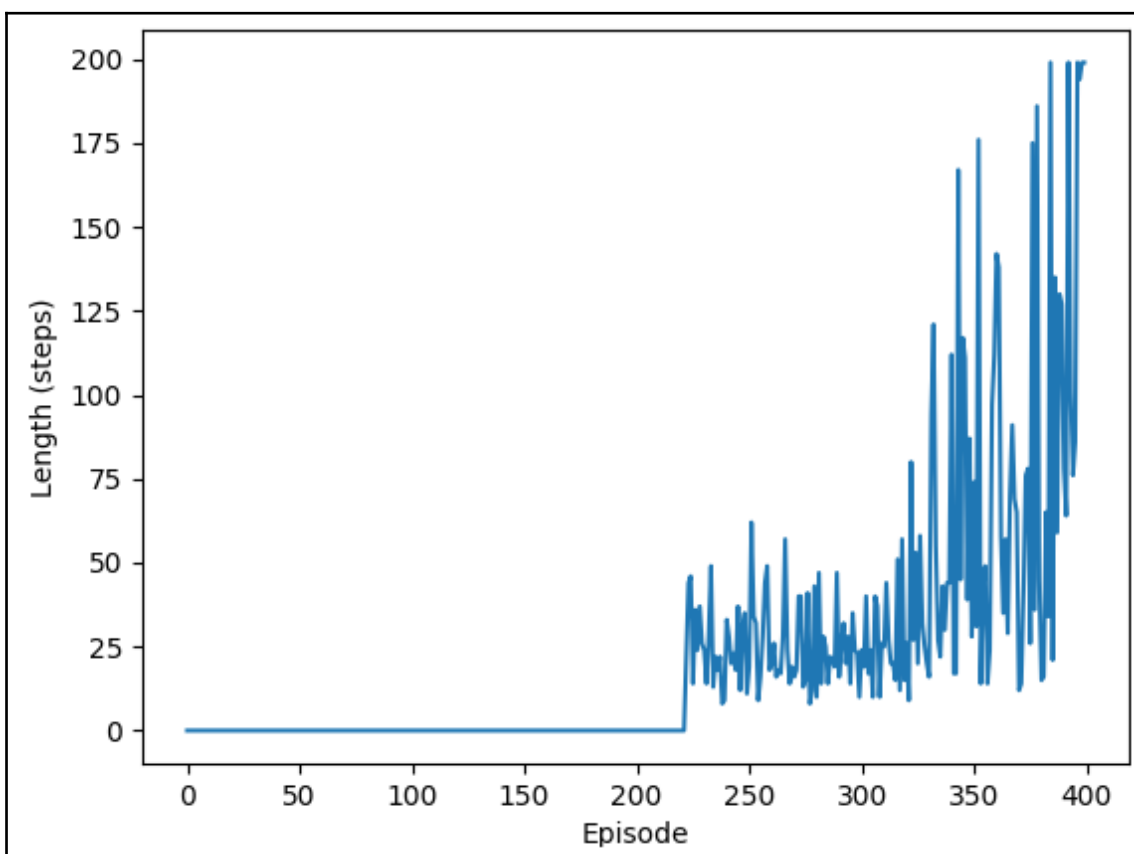
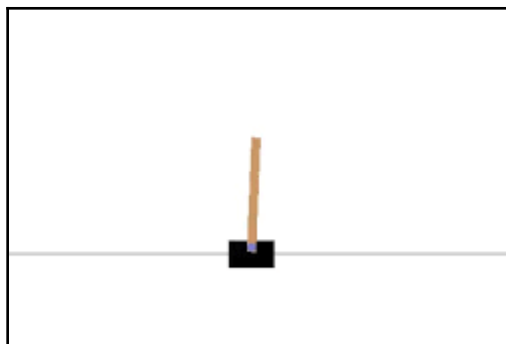




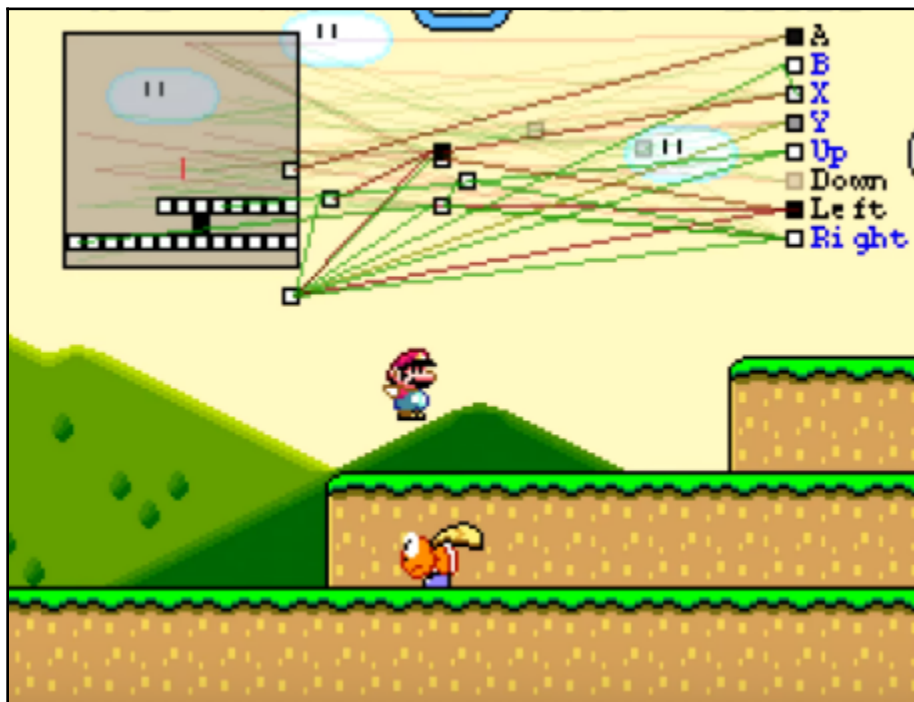


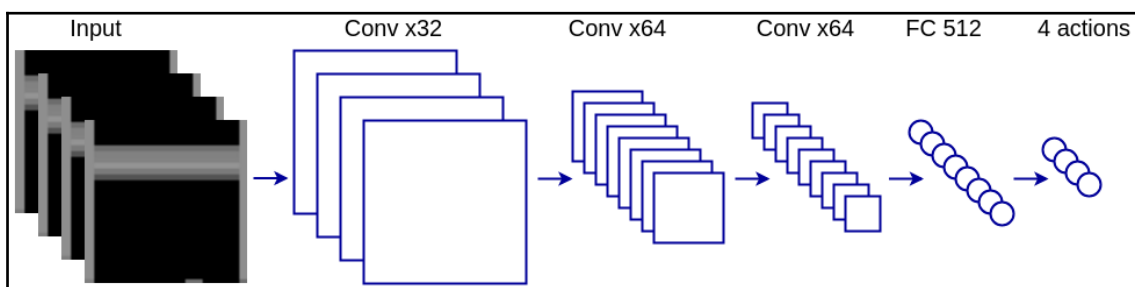
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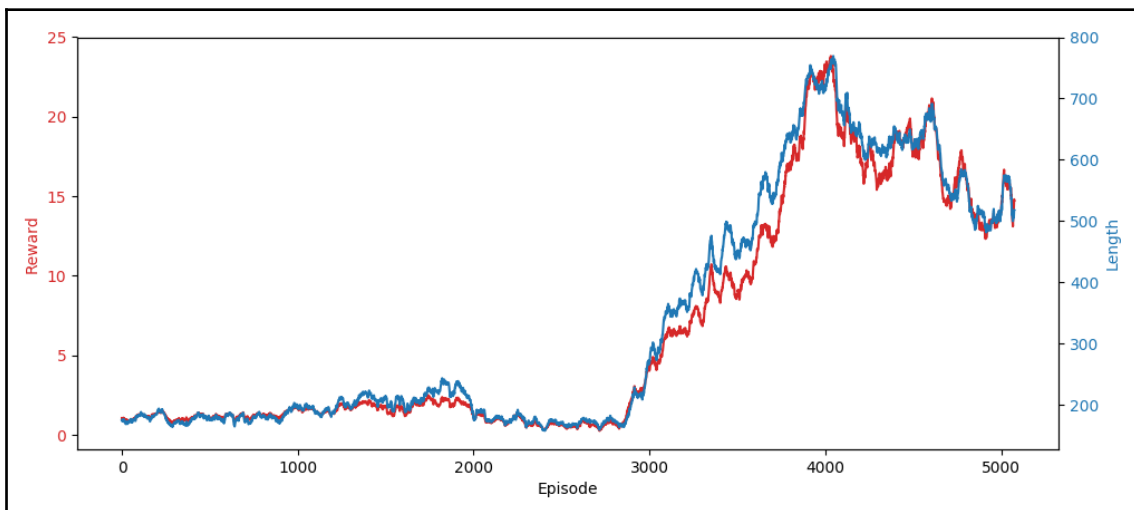
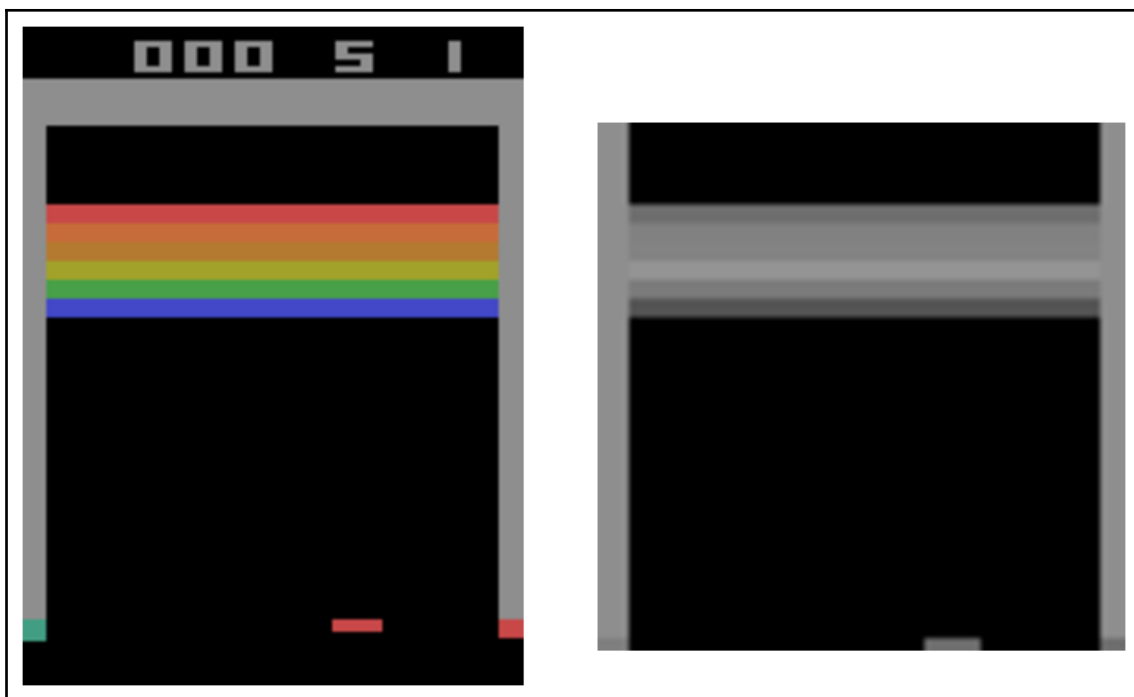


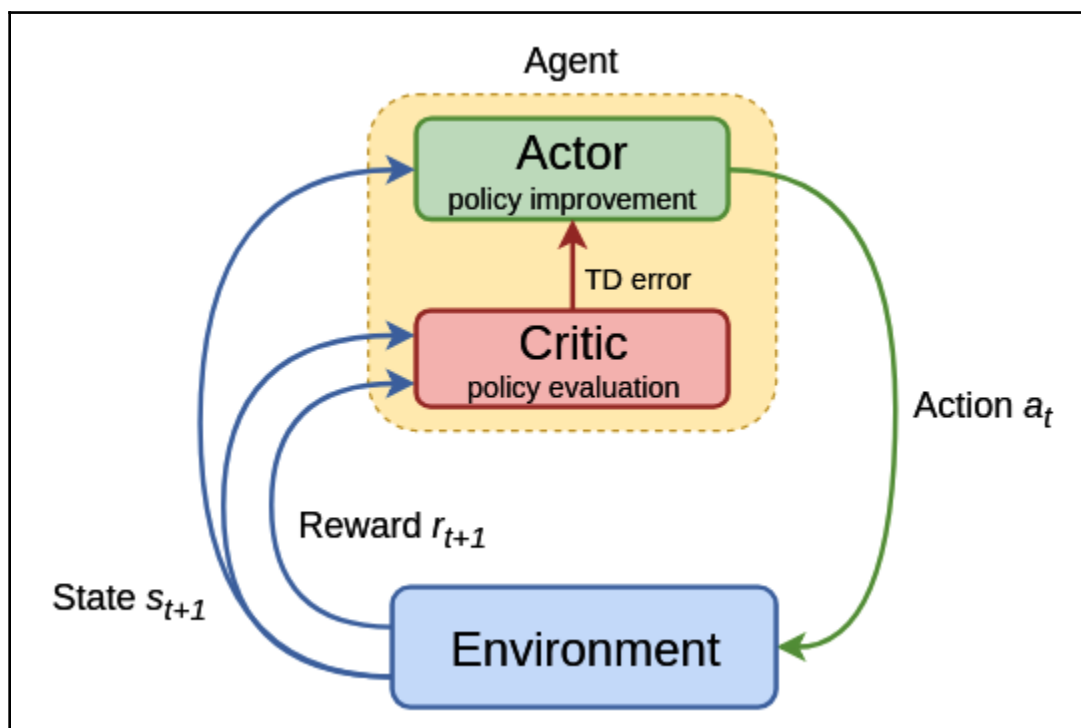
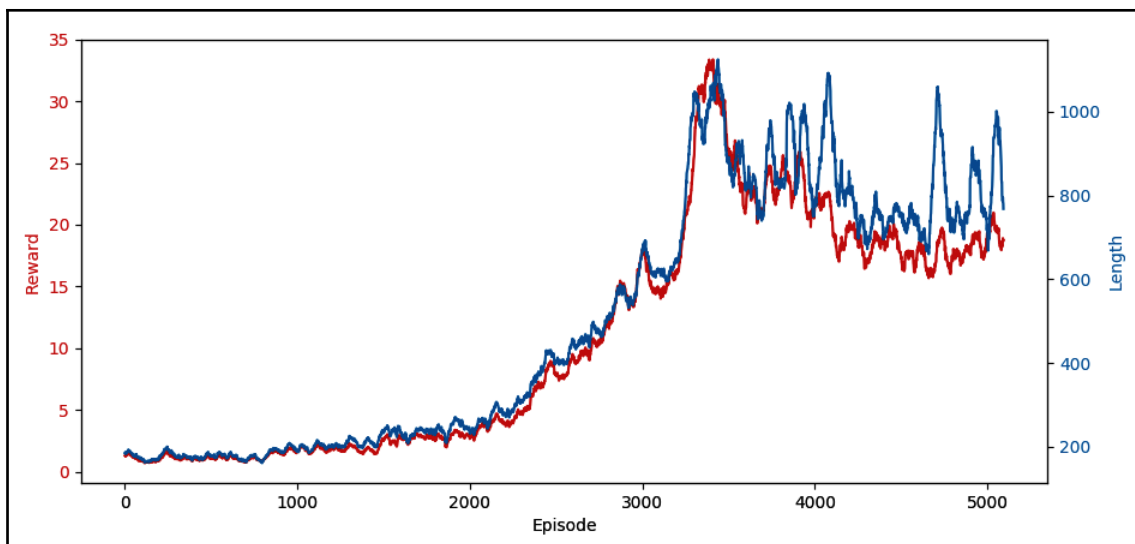


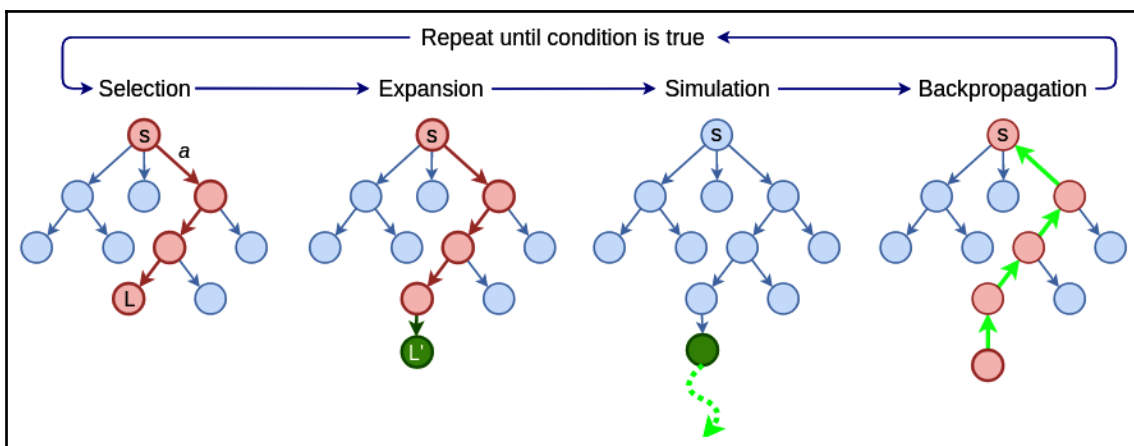
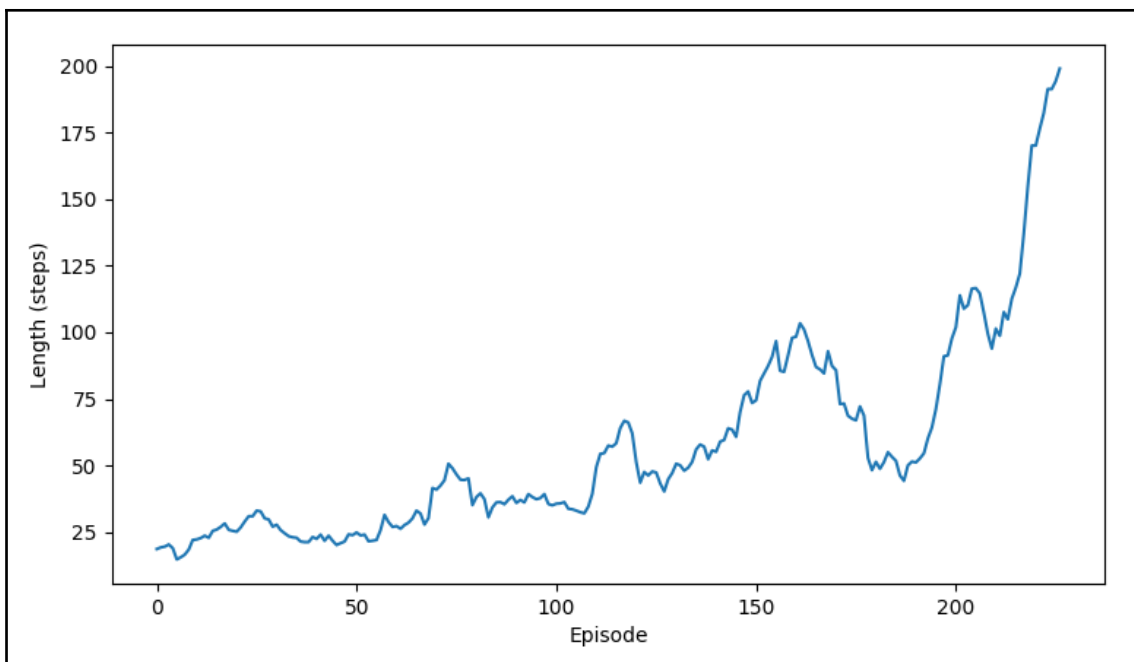
Chapter 9: Deep Reinforcement Learning for Games



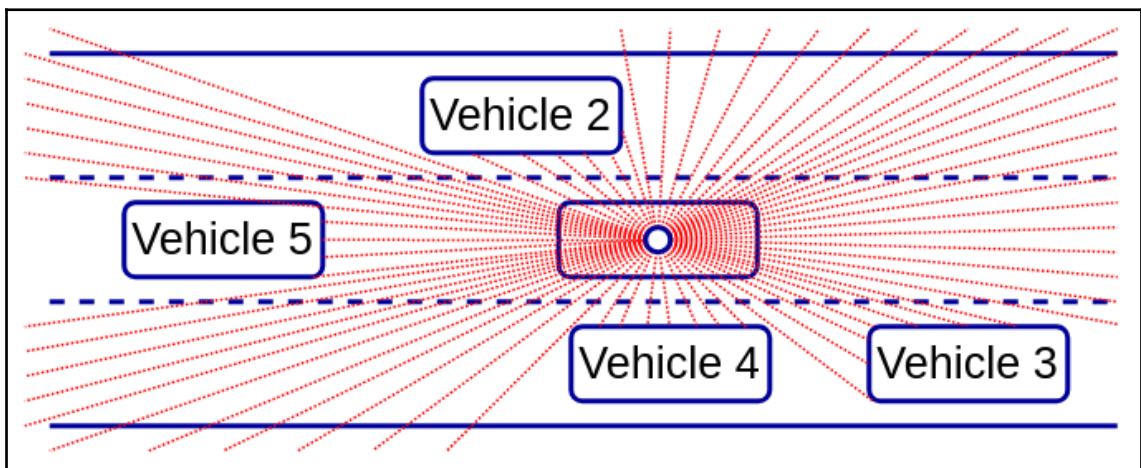
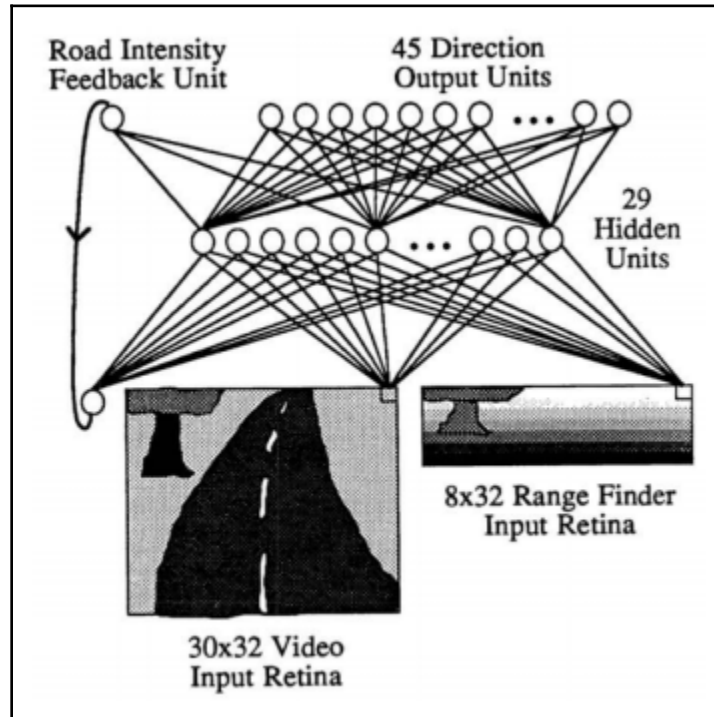


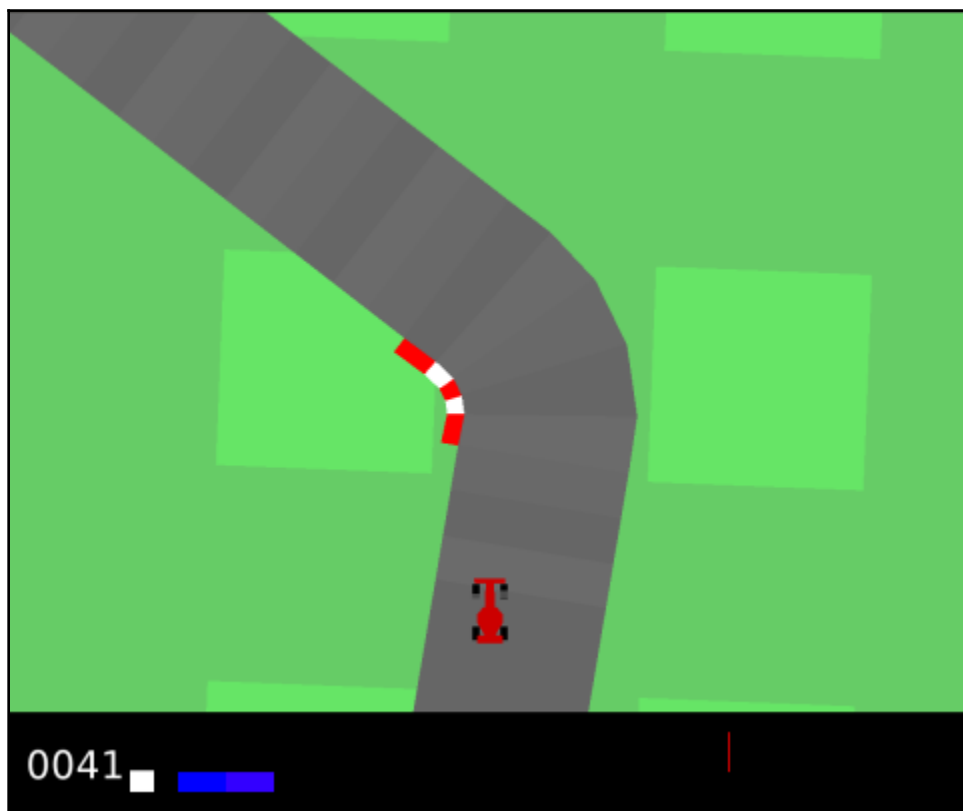
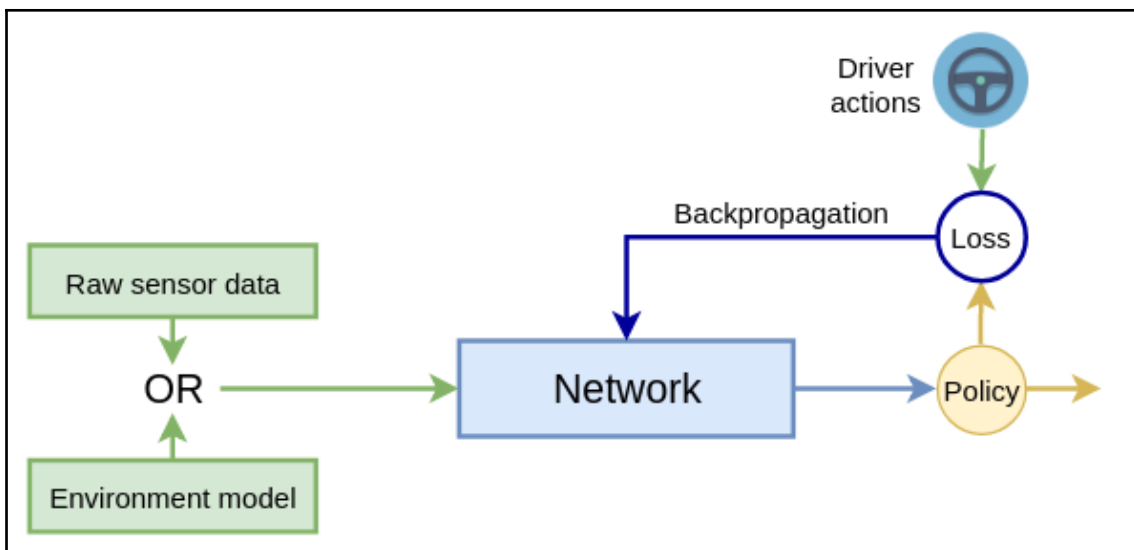


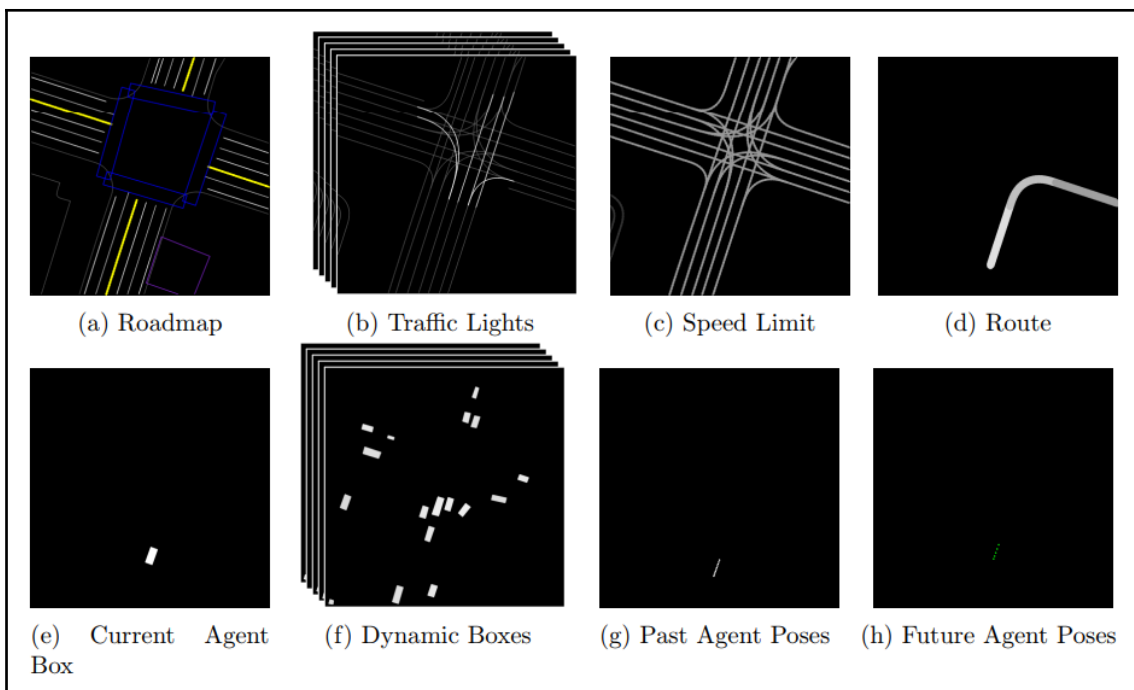


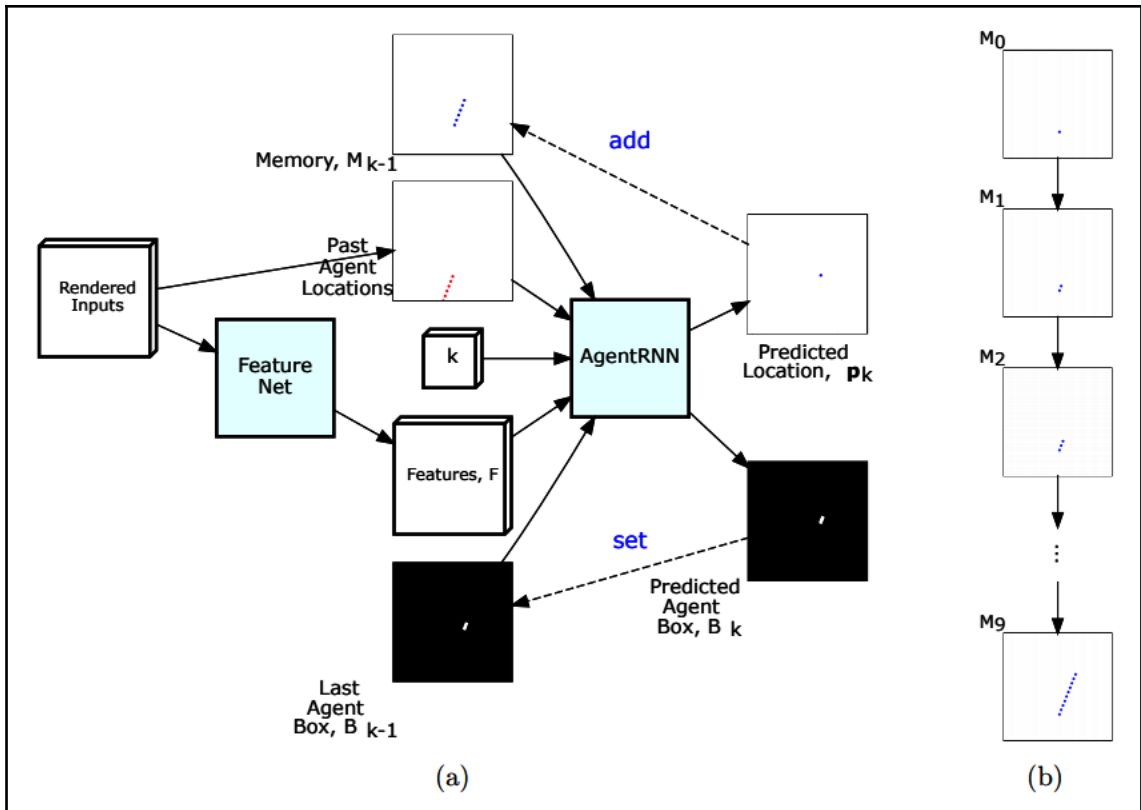


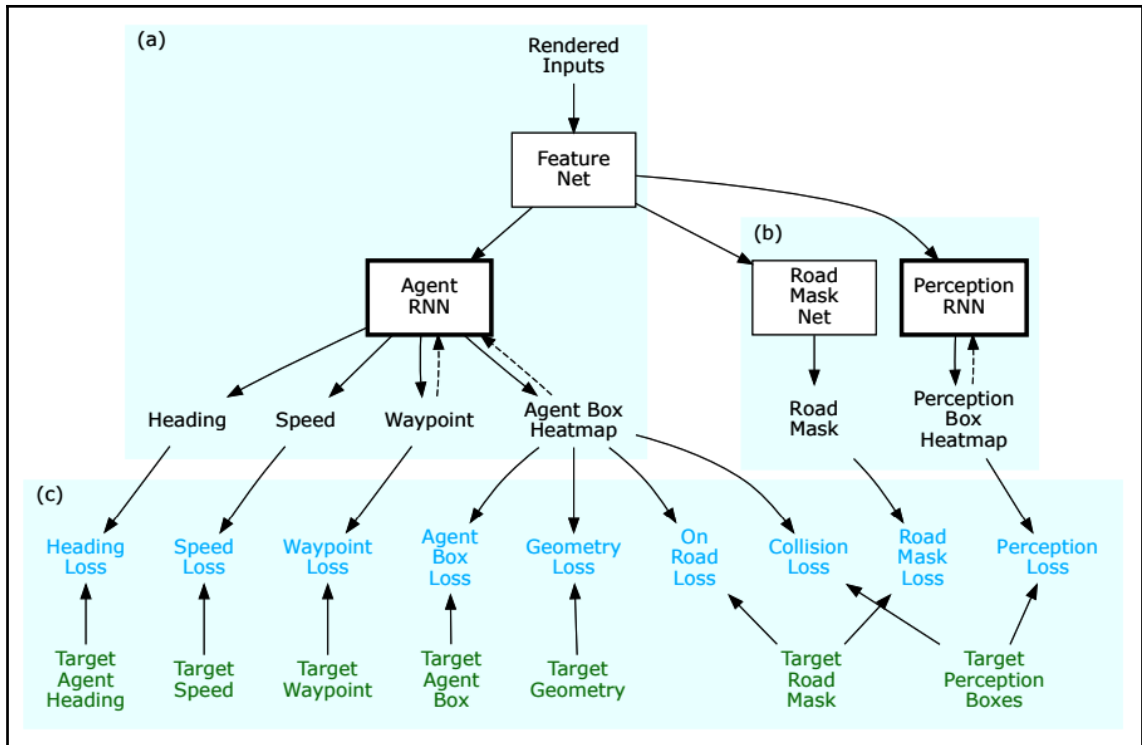
Chapter 10: Deep Learning in Autonomous Vehicles











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