Assignment2_ErenAkgunduz

January 28, 2024

1 Assignment 2

1.1 Eren Akgunduz

1.1.1 Deep Learning — 28 January 2024

1.1.2 Link to notebook

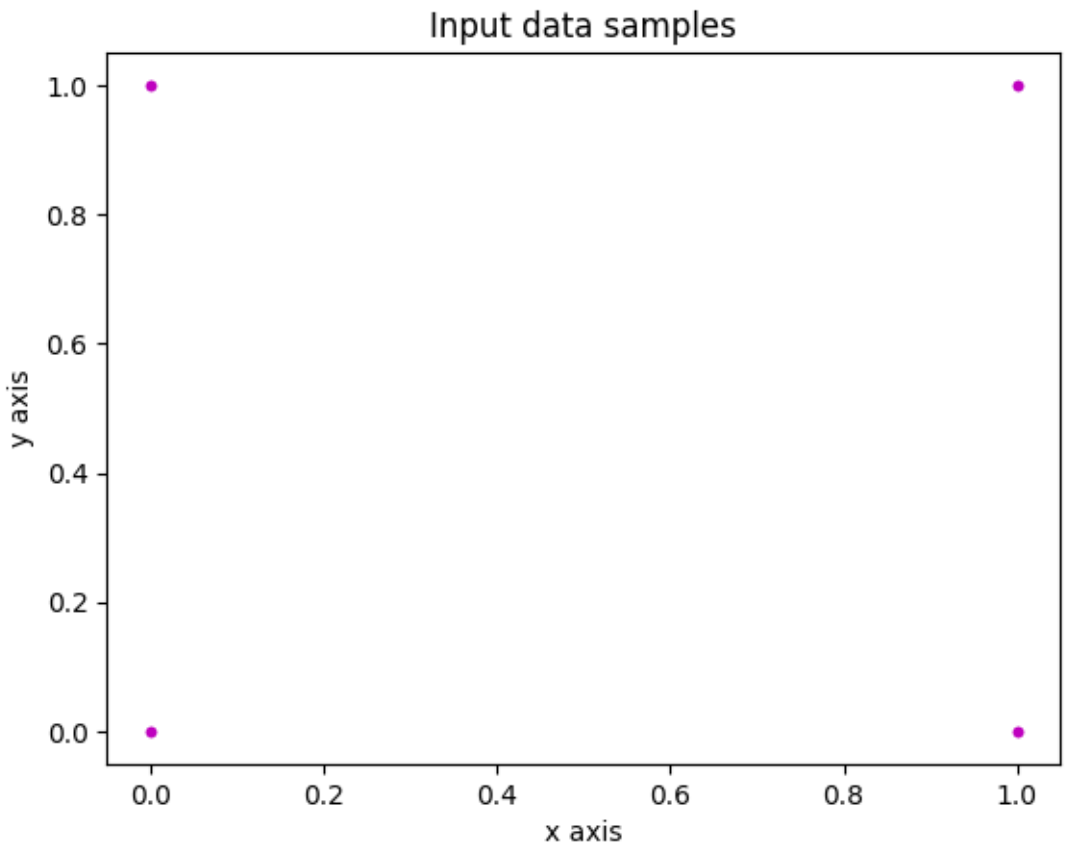
[ ]:
```
import matplotlib.pyplot as plt
```

[ ]:
```
data = [(0, 0), (0, 1), (1, 0), (1, 1)]
```

[ ]:
```
[plt.plot(point, 'm.') for point in data]

plt.xlabel("x axis")
plt.ylabel("y axis")
plt.title("Input data samples")

plt.show()
```



[ ]:
```
def logical_and(arg1, arg2) -> bool:
    if arg1:
        if arg2:
            return True
    return False
```

[ ]:
```
def logical_or(arg1, arg2) -> bool:
    if arg1:
        return True
    if arg2:
        return True
    return False
```

[ ]:
```
def logical_xor(arg1, arg2) -> bool:
    if arg1:
        return True if not arg2 else False
    if arg2:
        return True if not arg1 else False
    return False
```

[ ]:
```
and_list = [logical_and(sample[0], sample[1]) for sample in data]
or_list = [logical_or(sample[0], sample[1]) for sample in data]
xor_list = [logical_xor(sample[0], sample[1]) for sample in data]
```

[ ]:
```
test_and_list = [sample[0] and sample[1] for sample in data]
test_or_list = [sample[0] or sample[1] for sample in data]
test_xor_list = [sample[0] ^ sample[1] for sample in data]
```

[ ]:
```
[and_list == test_and_list, or_list == test_or_list, xor_list == test_xor_list]␣
↪ # just to see if we're good to go
```

[ ]:
```
[True, True, True]
```

[ ]:
```
and_list
```

[ ]:
```
[False, False, False, True]
```

[ ]:
```
or_list
```

[ ]:
```
[False, True, True, True]
```

[ ]:
```
xor_list
```

[ ]:
```
[False, True, True, False]
```