

## Lesson 33: Perceptron

Data Science with Python – BSc Course

45 Minutes

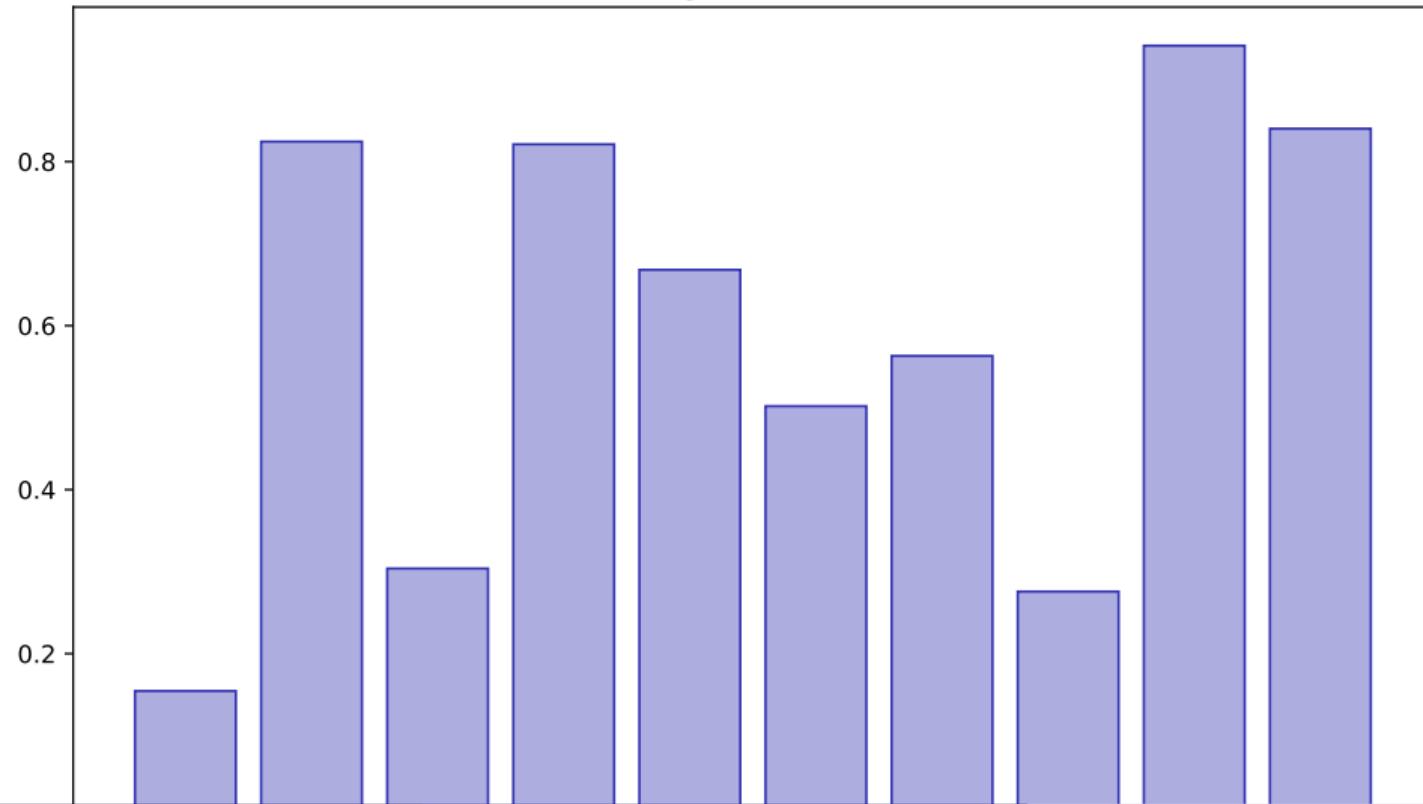
# Learning Objectives

**After this lesson, you will be able to:**

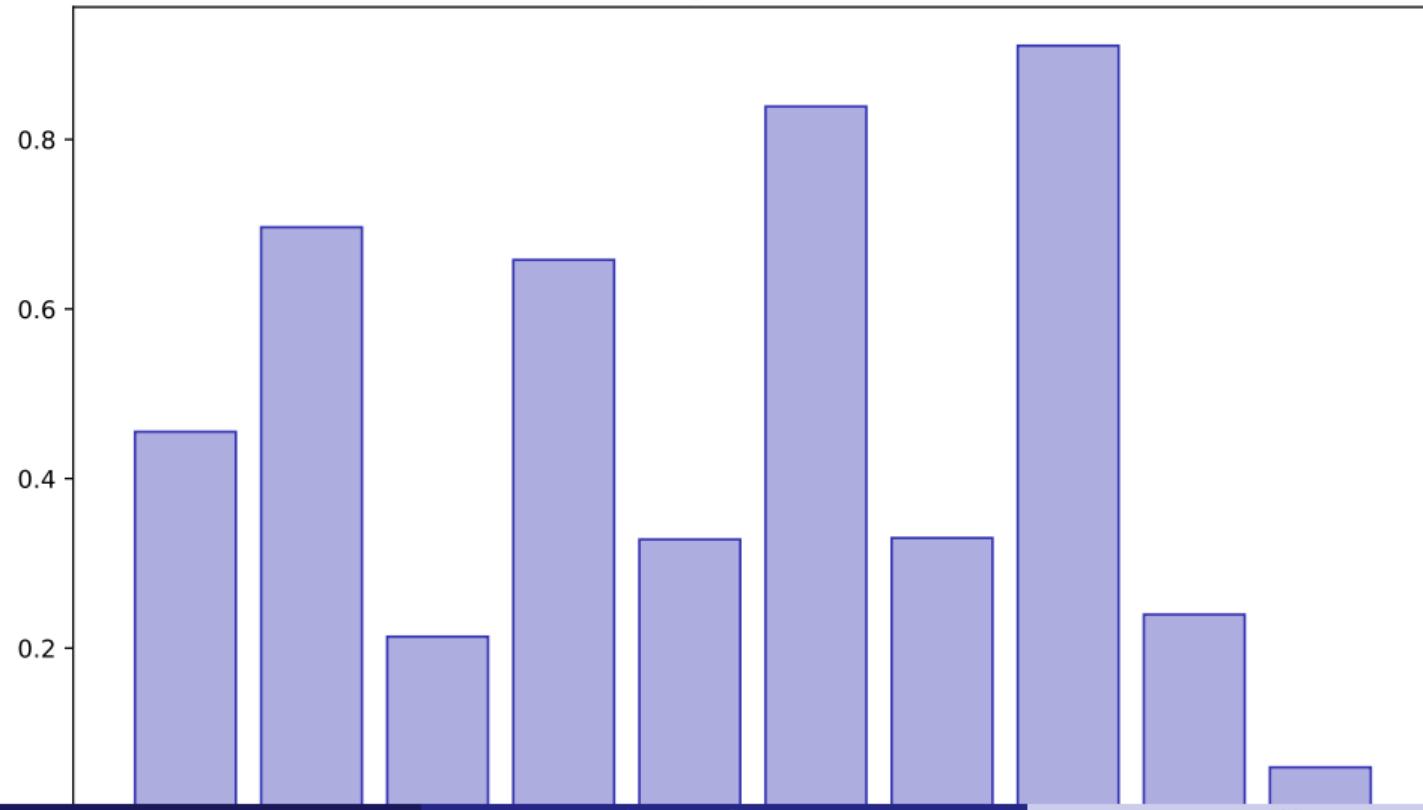
- Understand biological inspiration
- Build single perceptron
- Recognize linear limitations
- Prepare for deep learning

**Building towards your final project**

## Biological Neuron

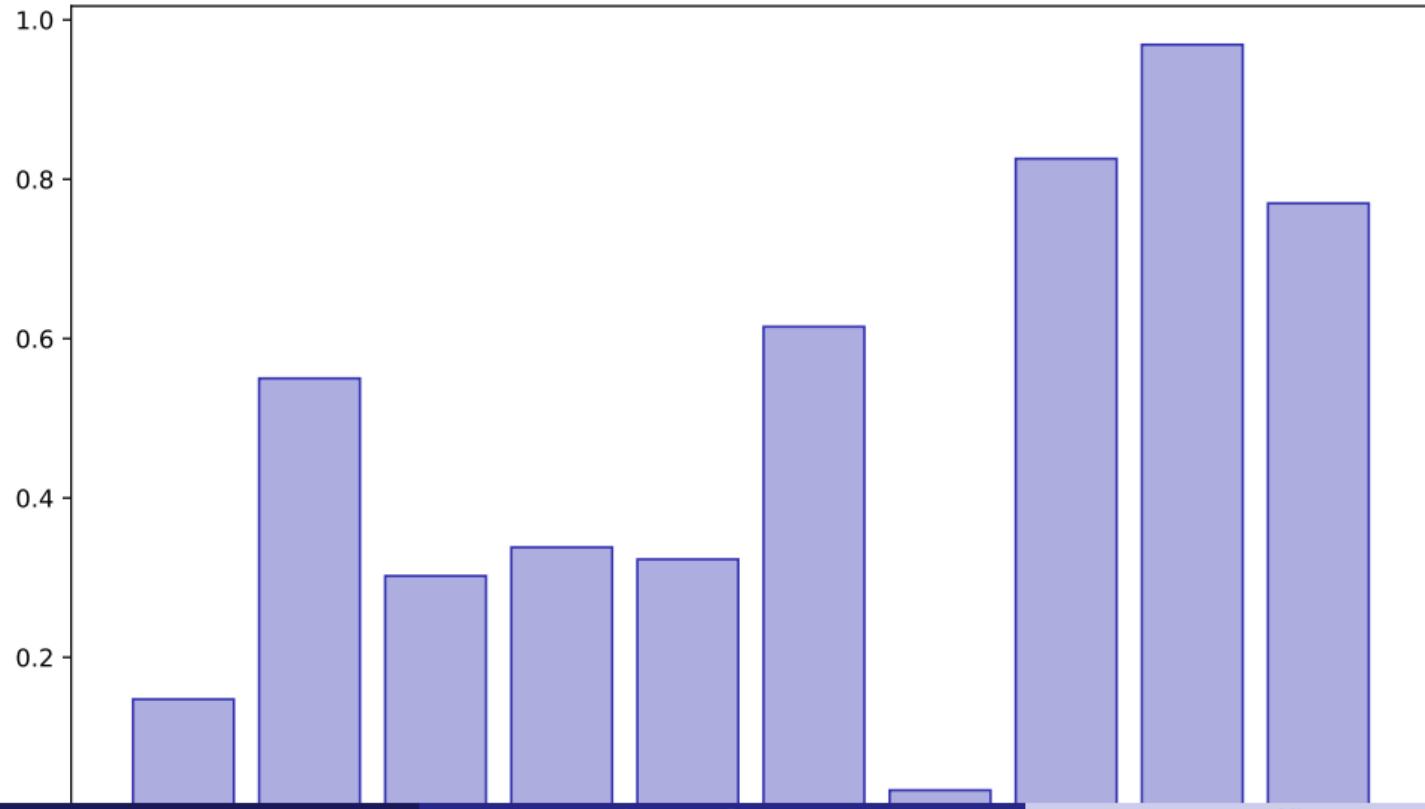


## Perceptron Model

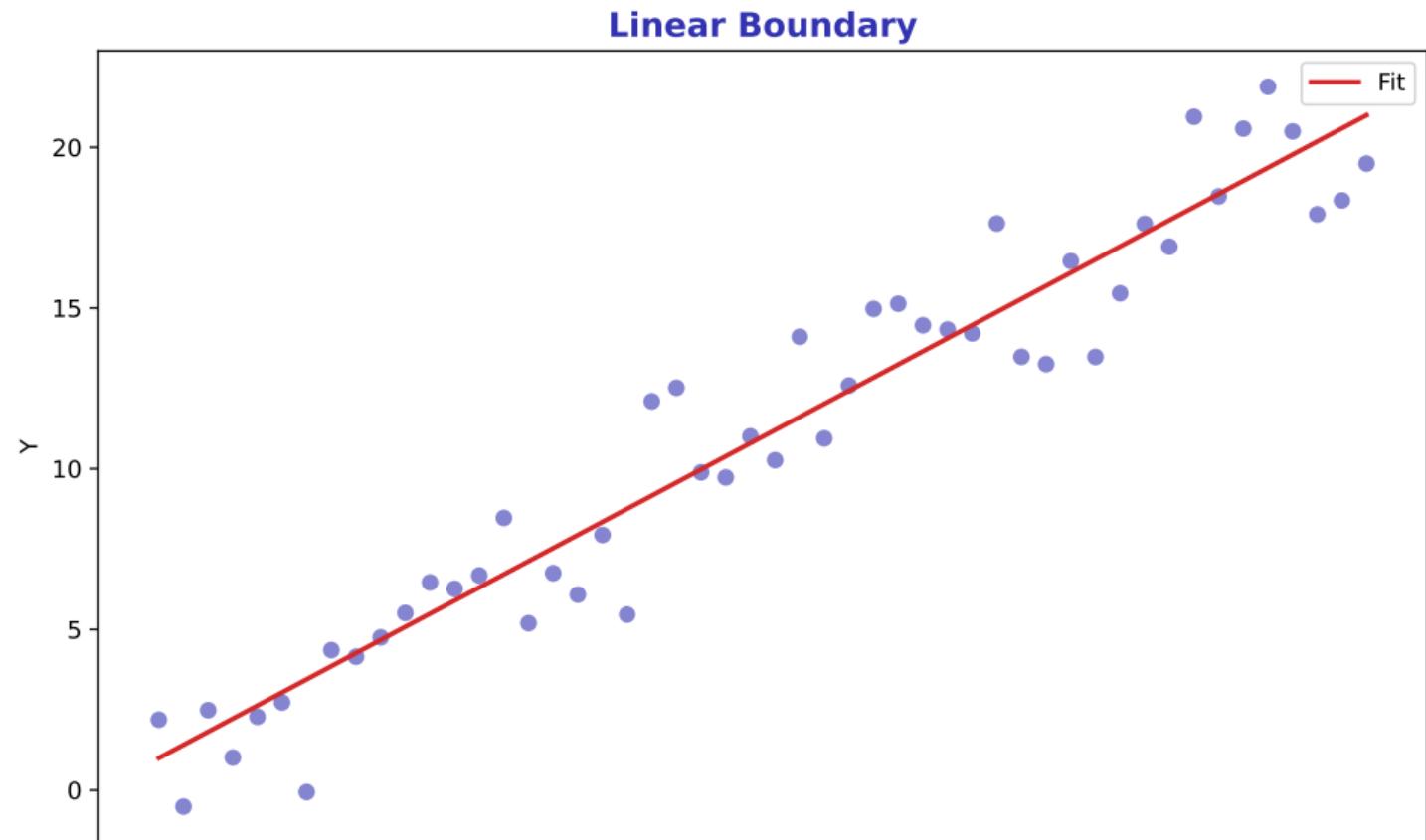


## Activation Threshold

**Activation Threshold**

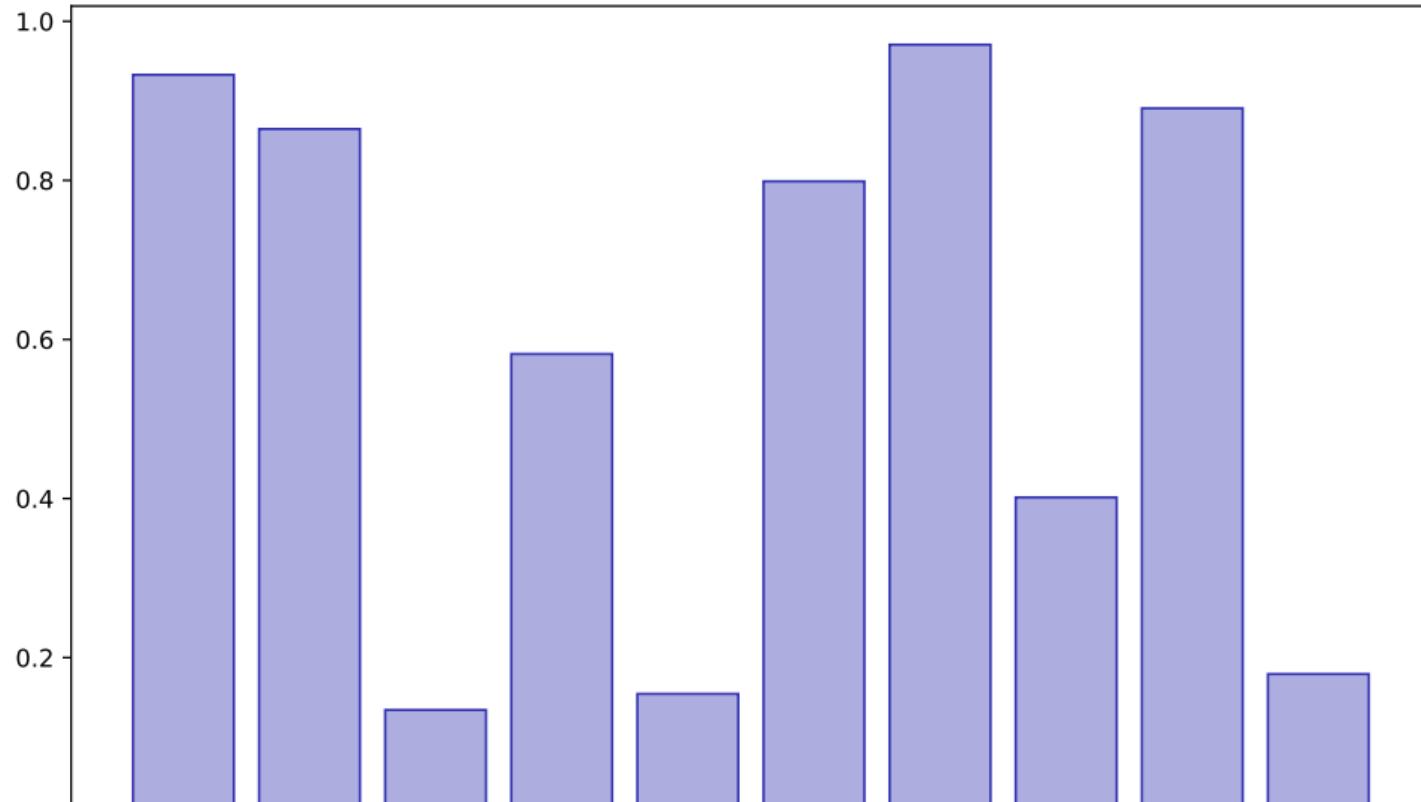


## Linear Boundary

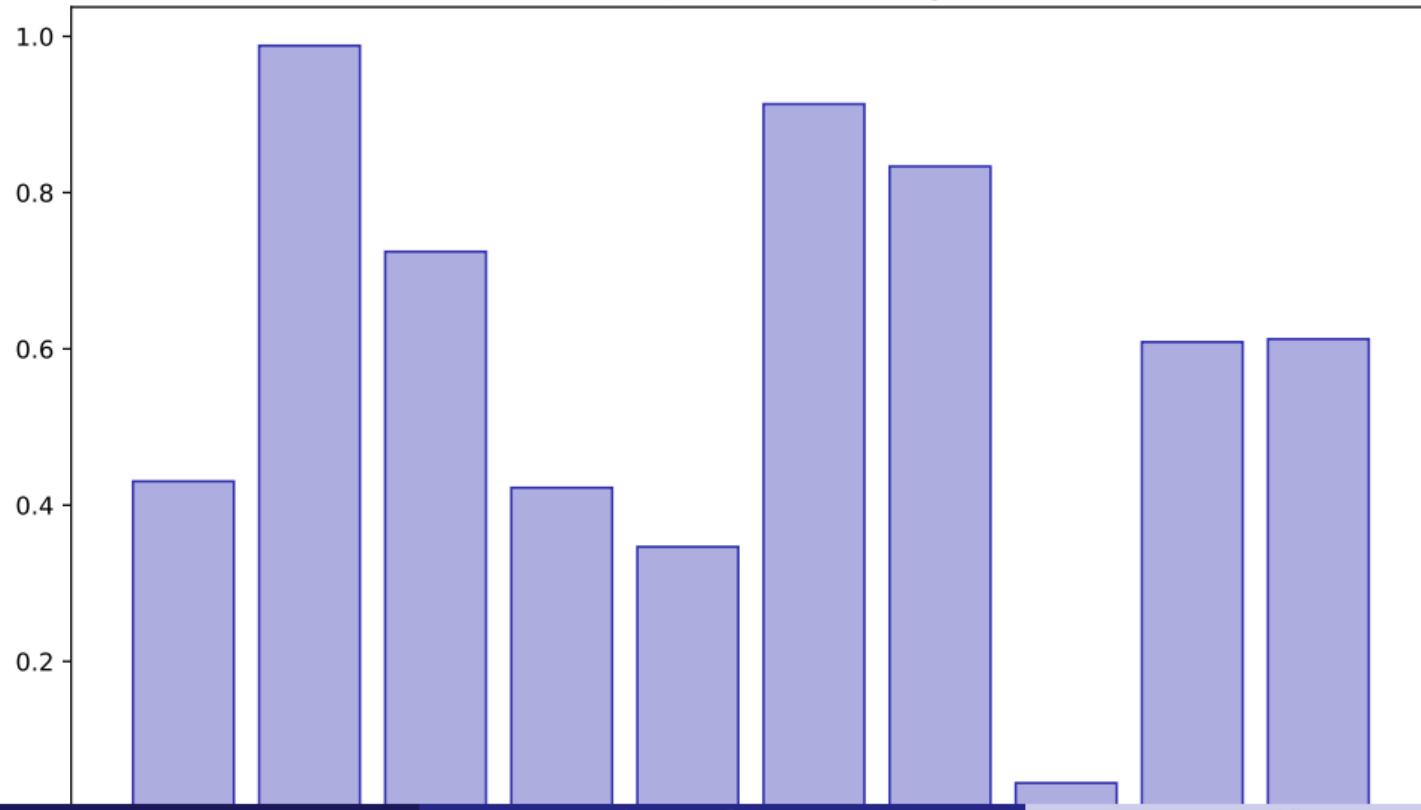


## Xor Problem

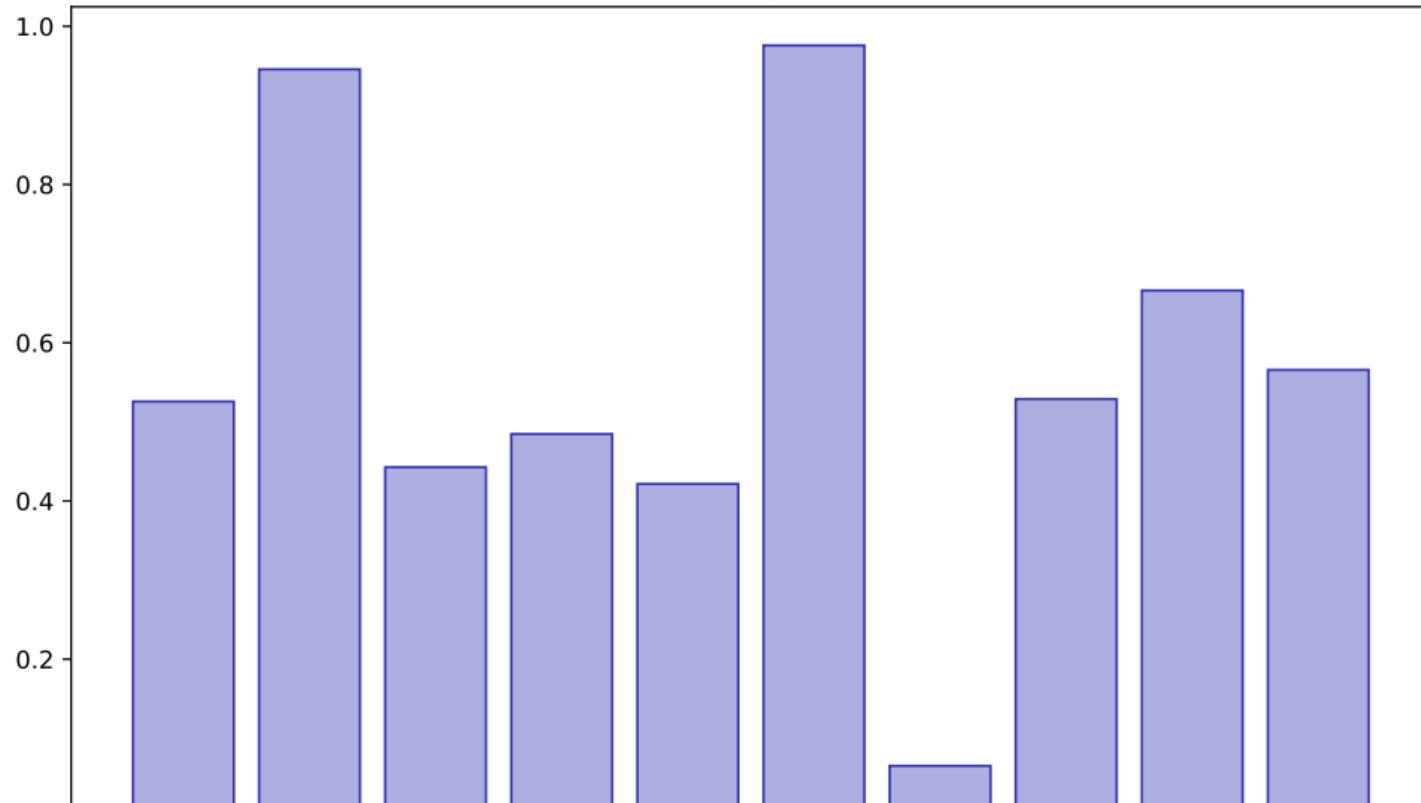
### Xor Problem



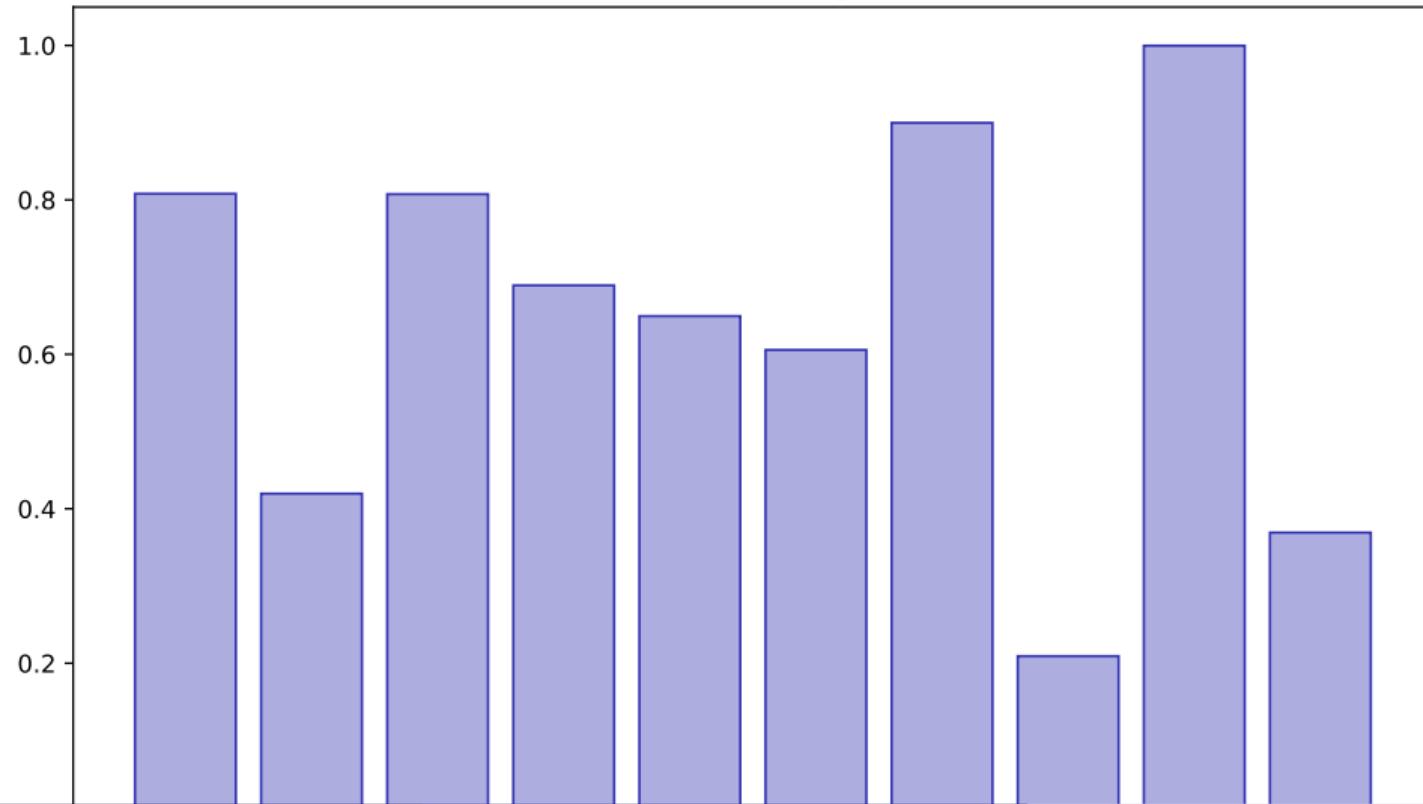
## Perceptron Learning



## Convergence



## Finance Perceptron



## Key Takeaways:

- Understand biological inspiration
- Build single perceptron
- Recognize linear limitations
- Prepare for deep learning

Apply these skills in your final project