

# Competition

---

Tensorboys

May 30, 2022

Pattern Recognition

# Agenda

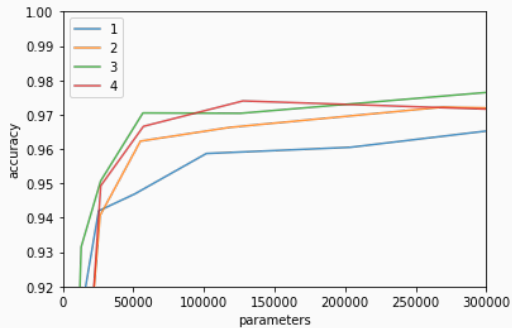
---

1. Multi-layer Perceptron
2. Convolutional Neural Network

# Multi-layer Perceptron

---

- We've tested multiple architecture from  $784 \times 2 \times 10$  to  $784 \times 512 \times 512 \times 256 \times 128 \times 10$ .
- This process was obviously automated.
- This yielded interesting results.



**Figure 1:** Relation between parameters and accuracy for different model layers. The number of epochs is 20 and the batch size 128 for each of the model. The best accuracy is 0.9775 with a 3-layer model:  $784 \times 512 \times 512 \times 256 \times 10$ .

# Convolutional Neural Network

---