IA5008: Sistemas neuronales

Assignment 5

Professor: Dr. Leonardo Chang Fernández

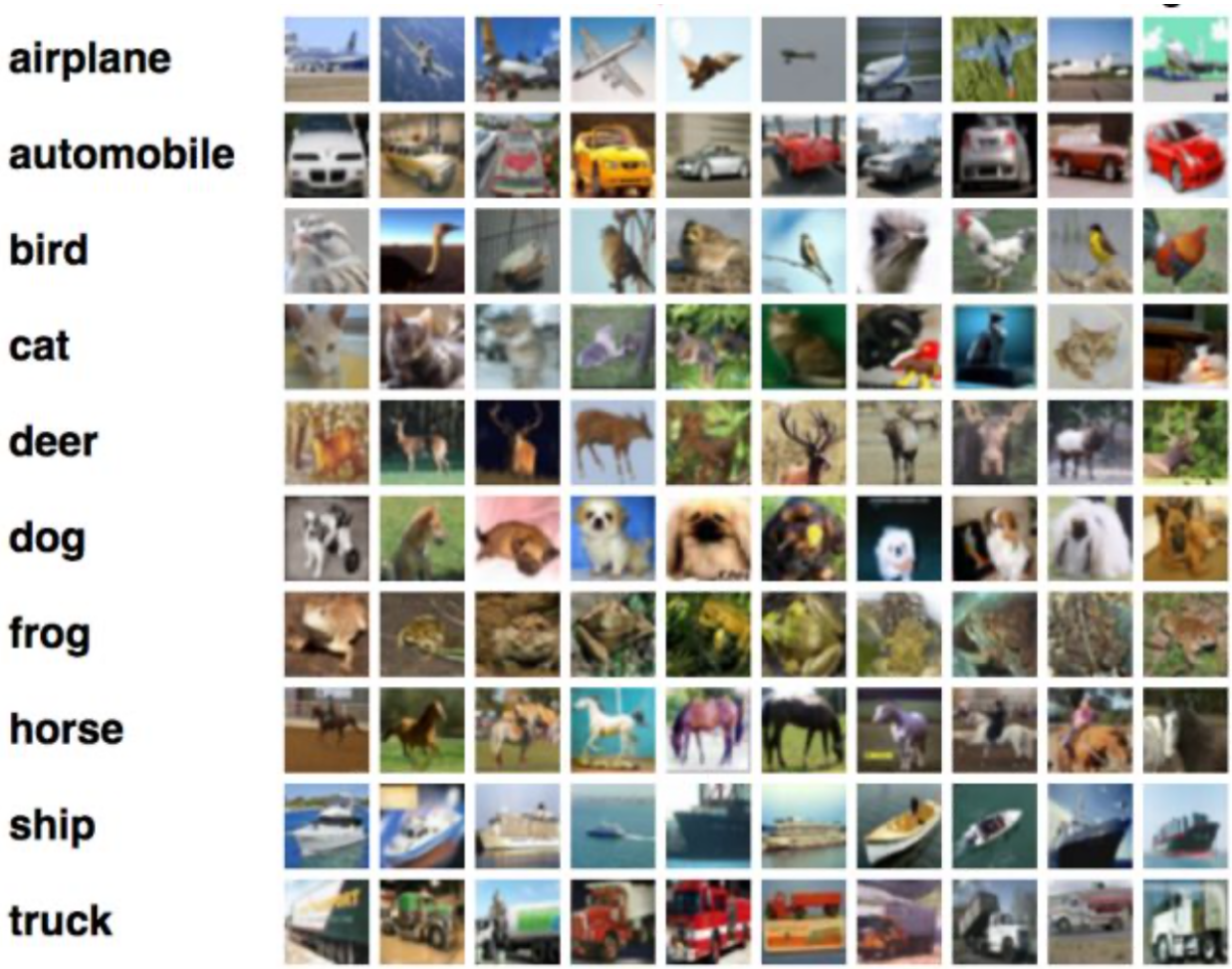
Classification with CNNs on CIFAR10

Instructions

Let's face a more serious classification problem. Called CIFAR10, this dataset is used as a benchmark, demonstrating how a new model outperforms its predecessors and establish itself as the state of the art of classification models.

We will see how even with a deeper and more powerful network the result is much lower than in the MNIST dataset, since the problem is more difficult. The CIFAR10 dataset consists of 50,000 RGB images of 32 x 32 pixels, divided into 10 categories.

- Adjust the following hyperparameters:
    - Number and type of layers
    - Number of filters
    - Filter size
    - Dropout
    - etc.
- Discuss the effect of these hyperparameters in the performance of classification.



Modality

In teams of up to two students. Deliveries through Classroom.

Evaluation ponderation

Criteria	Ponderation
Experiments	50%
Results discussion	50%
Total	100%