Deep Learning model

For German traffic dataset and CIFAR

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Procedure

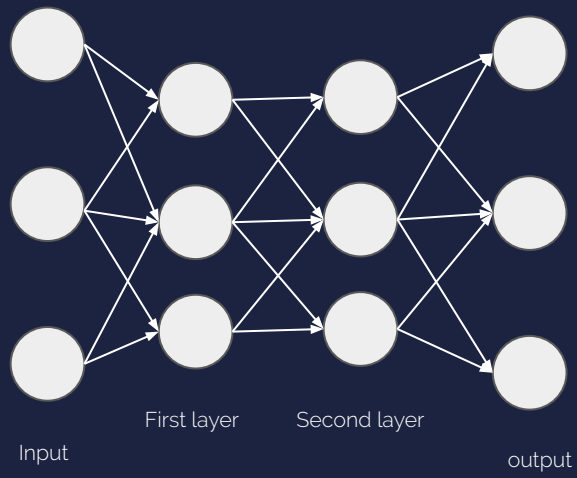
For training the neural network we tried several approaches

- EarlyStopping.
- Different activation functions.
- Different optimization techniques.
- Parameters grid.

Some of them failed, due to lack of computational resources and time

Parameters grid

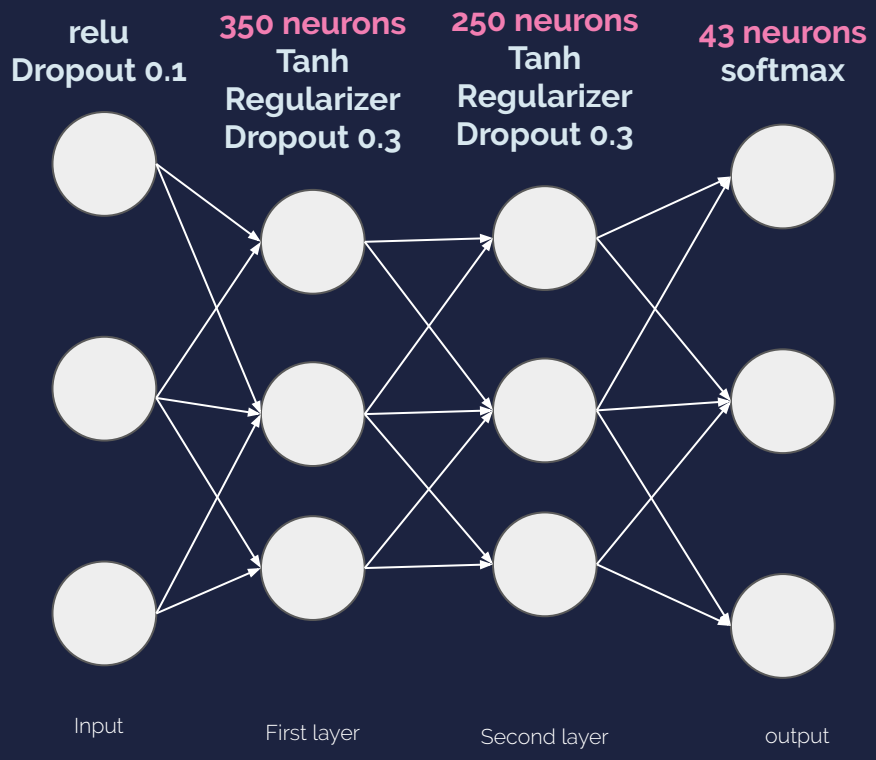
For defining the hyperparameters, we defined all the combinations with a fixed architecture.



Num. units 1	300	500	1000
Num. units 2	250	500	1000
Dropout	0.1	0.15	1.16
Learning rate	0.001	0.0001	
Optimizer	sgd	adam	

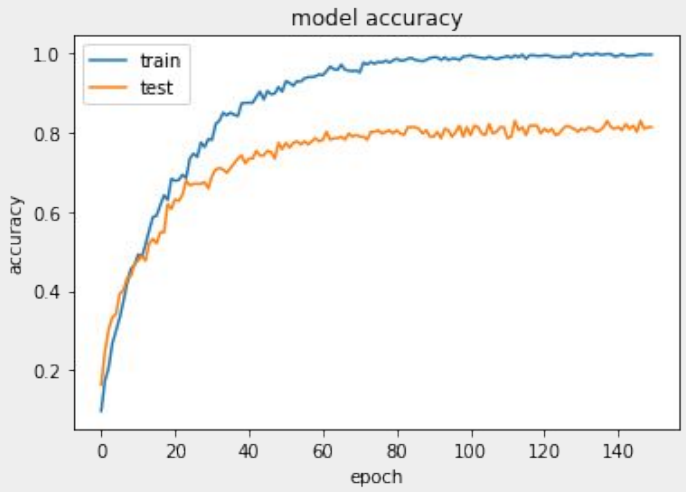
01 German traffic dataset

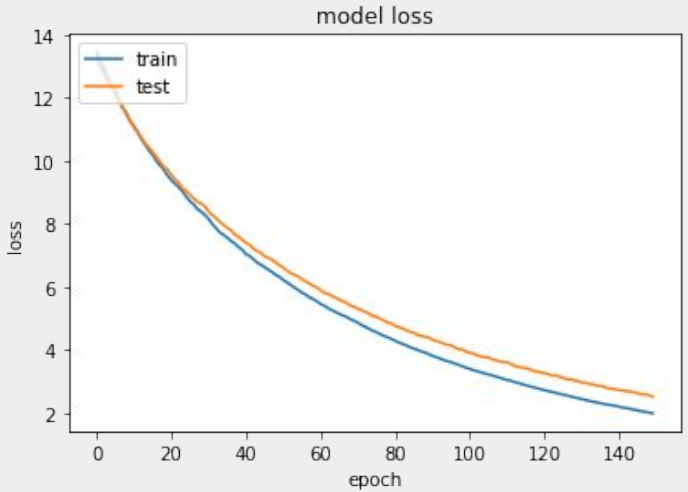
SELECTED ARCHITECTURE



150 epochs
SGD optimizer
Lr = 0.0001

RESULT





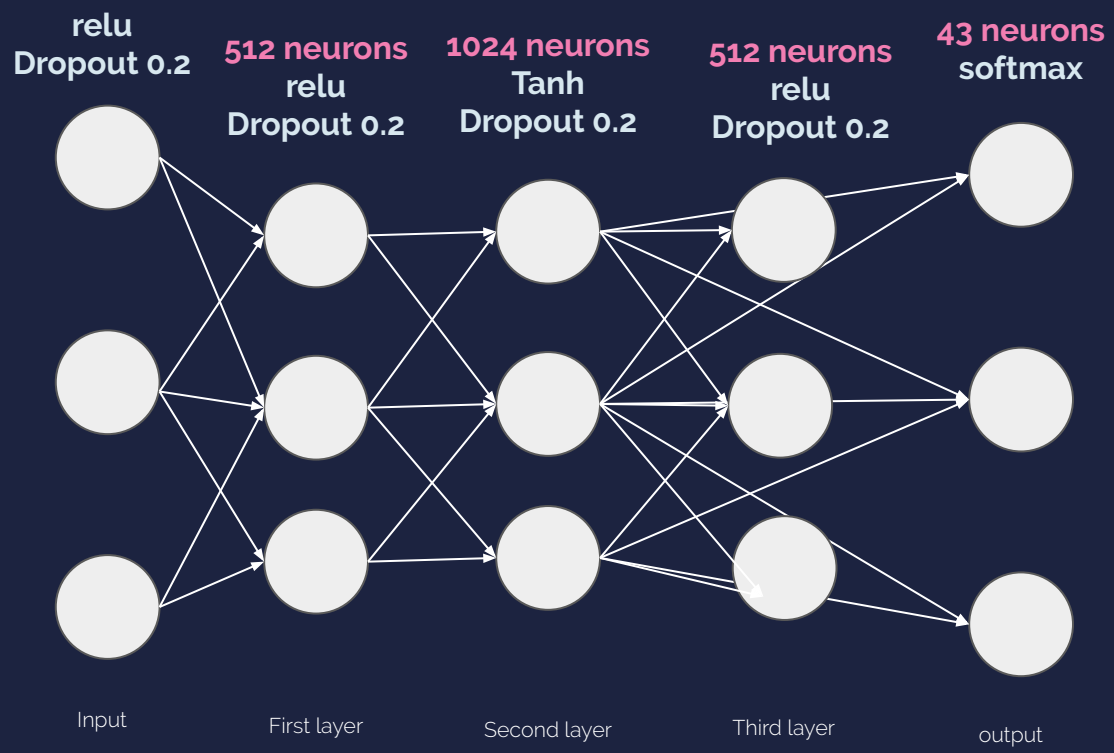
Accuracy: 0.8975

Loss: 2.2976

02

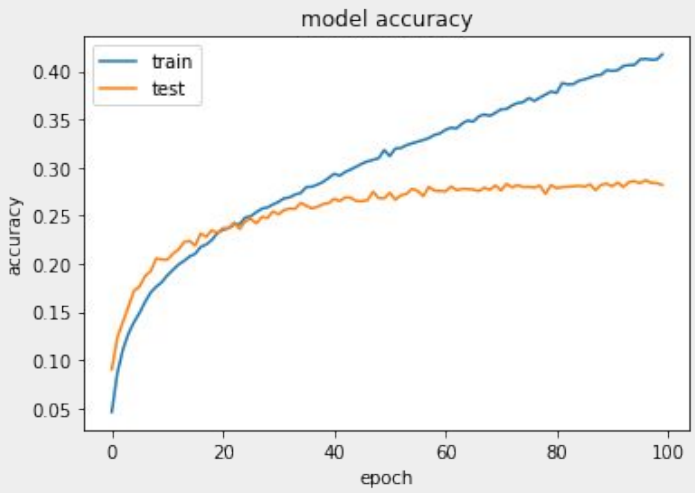
CIFAR 100 dataset

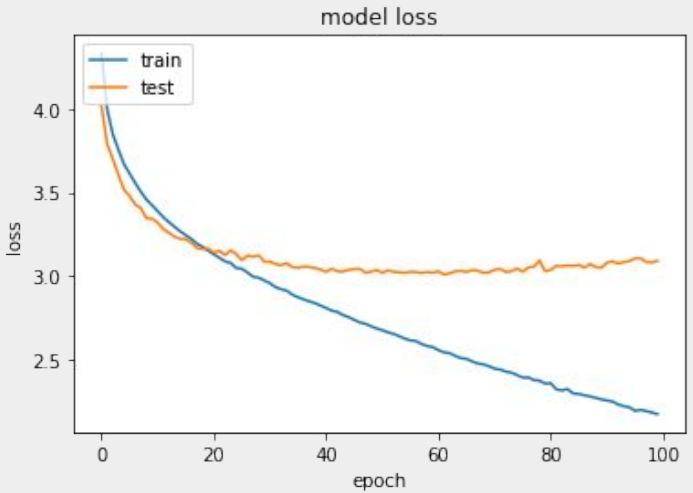
SELECTED ARCHITECTURE



100 epochs
SGD optimizer

RESULT





Accuracy: 0.2952

Loss: 3.0581

THANKS

Do you have any questions?

Rodrigo Pueblas
Carlos Sánchez
Cristian Abrante