

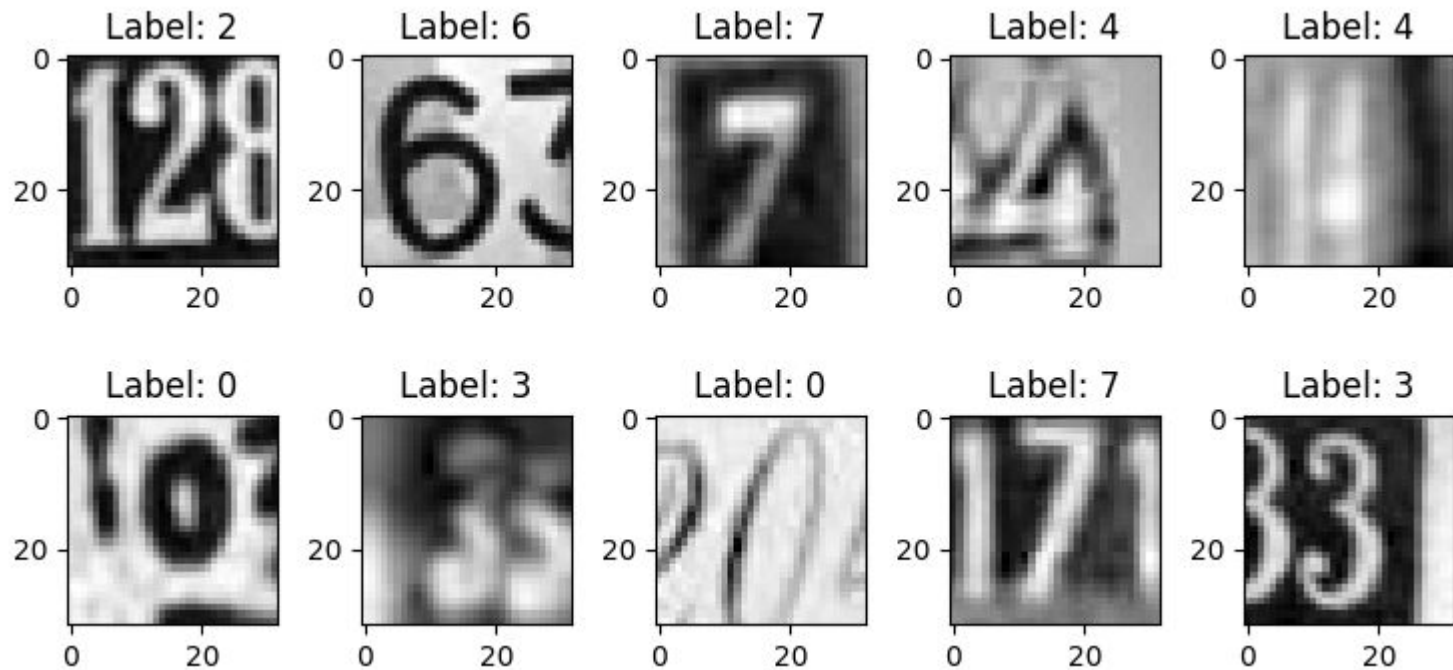
Моя первая нейронная сеть.
Распознавание номеров домов для
робота доставщика с помощью
нейросети.

Морозов Д.С.

Что должна делать моя нейронная сеть?



База данных SVHN



Сверточная нейросеть CNN Sequential

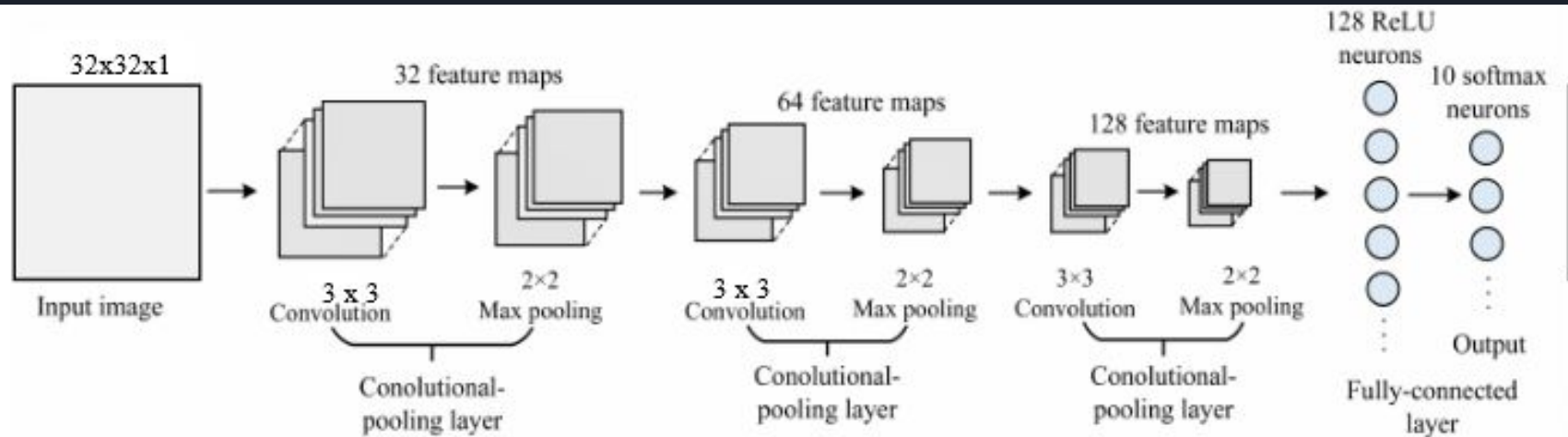
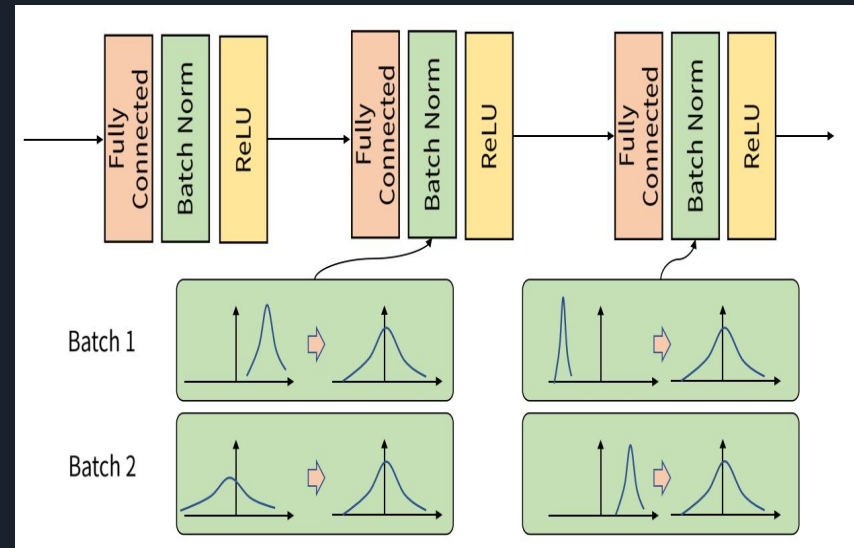
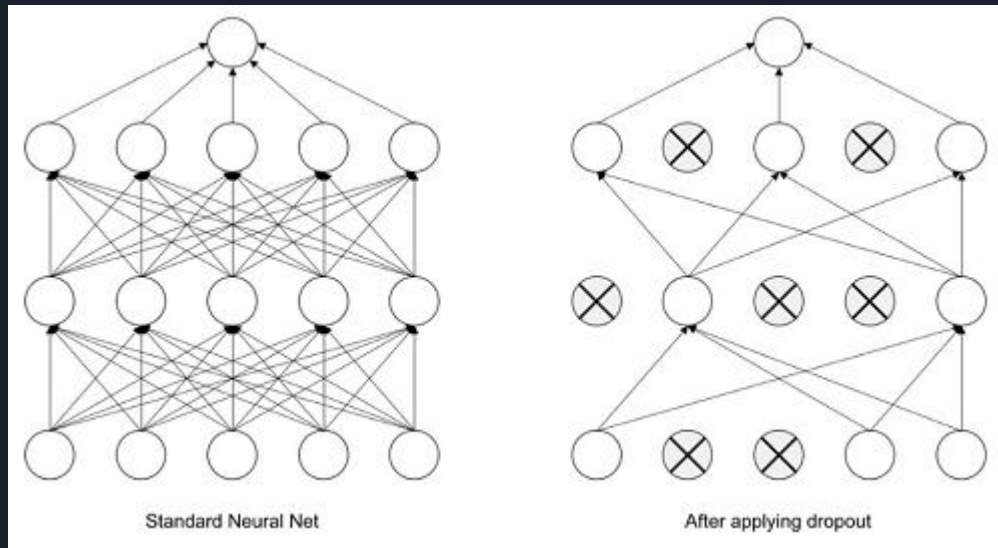


Fig: CNN (Convolutional Neural Networks)

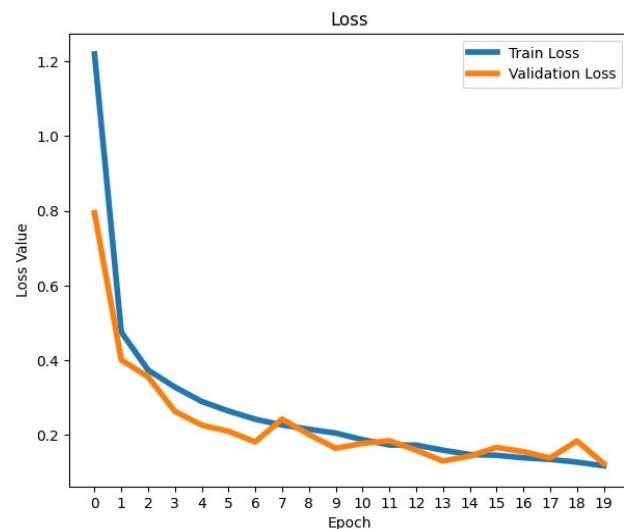
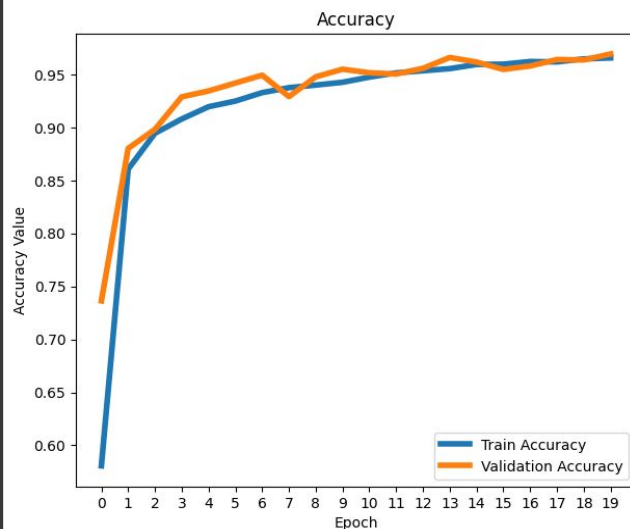
Dropout и BatchNormalization



Результаты

```
1313/1313 [=====] - 380s 289ms/step - loss: 0.1461 - accuracy: 0.9596 - val_loss: 0.1673 - val_accuracy: 0.9547
Epoch 17/20
1313/1313 [=====] - 320s 244ms/step - loss: 0.1396 - accuracy: 0.9621 - val_loss: 0.1558 - val_accuracy: 0.9579
Epoch 18/20
1313/1313 [=====] - 323s 246ms/step - loss: 0.1351 - accuracy: 0.9617 - val_loss: 0.1390 - val_accuracy: 0.9640
Epoch 19/20
1313/1313 [=====] - 383s 292ms/step - loss: 0.1280 - accuracy: 0.9646 - val_loss: 0.1844 - val_accuracy: 0.9636
Epoch 20/20
1313/1313 [=====] - 323s 246ms/step - loss: 0.1181 - accuracy: 0.9655 - val_loss: 0.1242 - val_accuracy: 0.9692
563/563 [=====] - 25s 44ms/step - loss: 0.2411 - accuracy: 0.9444
TEST SET: accuracy: 94.44%
```

CNN Model Performance



Пример использования

