

Deep Learning projects:

All these projects work on Pytorch (<https://pytorch.org>).

- 1) FFN project: In this project I have used FeedForwardNetwork for non-binary classification problem. Dataset: AG NEWS
- 2) CNN project: Convolutional Neural Network for image classification. Dataset: CIFAR-10
- 3) RNN project: Recurrent Neural Network for classification (positive/negative). Dataset: IMDB reviews
- 4) Autoencoders project: Dataset: CIFAR-10
- 5) VAE project: Variational Autoencoder for digits generation. Dataset: MNIST
- 6) DBN project: Deep Belief Network for non-binary classification. Dataset: Fashion Mnist.
- 7) CNN for image classification. Dataset: Intel Image Classification (<https://www.kaggle.com/datasets/puneet6060/intel-image-classification/data>)
- 8) VAE for faces generation. On custom dataset (images from Internet) and Labelled faces in the Wild (<https://www.kaggle.com/datasets/jessicali9530/lfw-dataset>)

Machine Learning projects:

I have used different libraries and techniques to solve simple problems and hard problems like Breast Cancer classification, Titanic survival classification. Mostly prefer to work with XGBoost.

Big Data projects:

In these projects was used Spark (Pyspark).

1) Project1 uses two different algorithms to calculate number of triangles in the file. First: approximation number of triangles using Node Colors. Second: approximation number of triangles using Spark partitions.

2) Project2 also uses two different algorithms to calculate number of triangles in the file. First: approximation number of triangles using Node Colors. Second: exact number of triangles.

Files facebook_large and facebook_small can be used to obtain and evaluate results of different algorithms used to calculate number of triangles.

Statistical learning project:

Applying statistical analysis and modeling for Bank marketing campaign. Dataset: Bank marketing (<http://archive.ics.uci.edu/dataset/222/bank+marketing>).