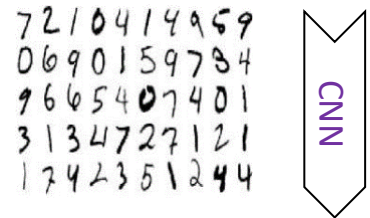
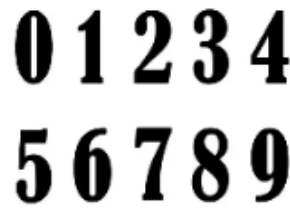
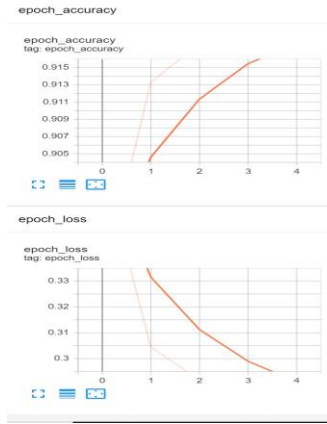
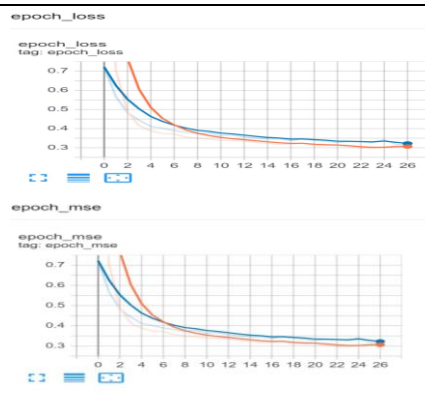
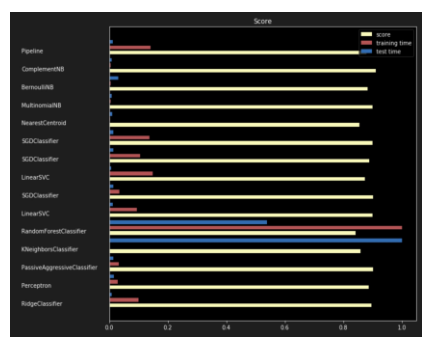


Project	Tools & Methods	Description	Visualization
Digit Recognition - PyTorch This project taught me how to use the ML library, PyTorch on the Apache Spark single driver node to fit a Neural Network onto the MINIST dataset.	<ul style="list-style-type: none"> PyTorch library Apache Spark driver single node 	Using ML library(PyTorch) to build a CNN model on MNIST dataset, after data processing. Find the nearest point to recognize the digit from handwritten document.	 
Digit Recognition - Tensorflow This project taught me to use another ML library, TensorFlow , to fit a Neural Network onto the MINIST dataset to recognise handwritten digit.	TensorFlow library Apache Spark driver single node	Using ML library(TensorFlow) to build a CNN model on MNIST dataset, after data processing. Find the nearest point to recognize the digit from handwritten document.	
Deep learning: end-to-end by using TensorFlow Keras, Hyperopt and MLflow Using AI and ML techniques on dataset to predict house price. I learned how to use 3 ML libraries to build model and register in MLflow to use latter.	Using TensorFlow Keras, Hyperopt, and MLflow to develop a deep learning model on the dataset for predict data.	Using ML libraries to build some model on Fetch_california_housing dataset after data processing, to predict house price on California and register model in MLflow.	
Text documents classification by sparse features-plot I learned building model by ML library(scikit-learn) for document classification and show by topic number on plots.	Using scikit-learn to classify documents by topics using a bag-of-words approach. Using the scipy.sparse matrix for storing the features and demonstrates various classifiers.	Build a model by ML library (scikit-learn) to classify document by topic with plots.	

[Pipeline for extract and evaluate text-Machine](#)

I always like to filter news for myself. 1st step is extract and evaluate news text. I build a model to classify documents in 20 categories.

20 newsgroups dataset is automatically download, catch and reuse for document classification.

Create model to extract and evaluate text on 20 newsgroups dataset. Automatically get 20 categories or user can giving category name to dataset for adjusting number of them.



[Track machine learning training runs Log runs to a notebook or workspace experiment](#)

This project taught me how to build a model on a simple dataset to Tracking training runs.

Random Forest model on a simple dataset and MLflow Tracking API to log the model.

Create a Random Forest model on a simple dataset. Uses the MLflow Tracking API to log the model. Selected model parameters and metrics.

Parameters

Name	Value
max_feat	3
maxdepth	6
num_trees	100

Metrics

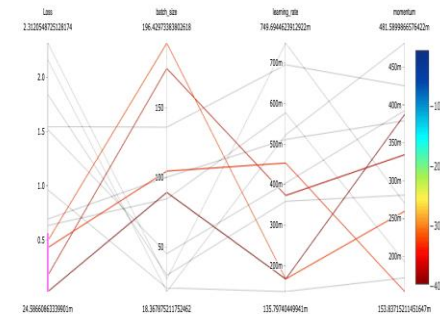
Name	Value
mse	3024.3

[ML Hyperopt & SparkTrials: Model](#)

This project taught me parallel training and Obtain the best. By train models by ML libraries (Hyperopt, SparkTrials).

Train simple classification model by MLflow tracking Hyperparameter tuning to obtain the best performing model by Hyperopt

This is an example of machine learning, for train models used ML libraries. Use Hyperopt with SparkTrials for scale hyperparameter tuning.



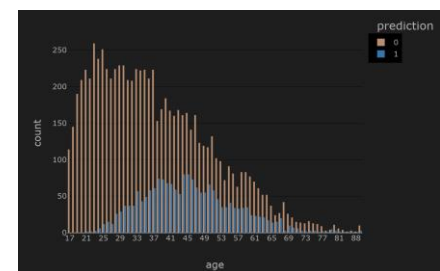
[Predict if an individual's income > \\$50,000](#)

I learned binary problem solving by machine learning library in this project.

Using Apache Spark's machine learning library(MLlib) to Investigates binary classification problem.

- Hyperparameter tuning
- Make predictions and evaluate

Is an income > 50K on each age range.

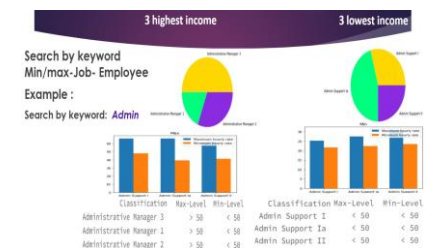


[Job Analysis](#)

On this project I learned the best ways for data processing and preparing data professionally for modelling.

Problem statement
Data cleaning
Exploratory analysis
Feature engineering
Methodology

Get user expectation (by asking question from user) and recommend some sorted job category with salary range and information.



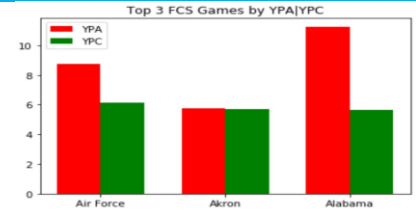
[3 Top FCS Games from 'College Football Data API'](#)

Visualizing top 3 FCS game live from:

api.collegefootballdata.com

Load data from api
Data preprocess
Plays, YPA and YPC summarize by function.
3 Top FCS Games
Plot data

Plays, YPA and YPC summarize by function classified by City.



Playing FIFA made me think to have real match result for each 2 teams I chose for each game. I like to have other players data in the same game and my history to compare them with my last result.

That inspired me to work on football data

[Introduction of FIFA world cup history](#)

FIFA world cup history.

Contain some dashboards includes related chart from processed data to get maximum information from them.

This report containing a map to show countries and count of the matches played by heatmap for each. the table to show information by text and the line chart to compare countries in term of number of matches they had played on world cups from 1930 to 2014.

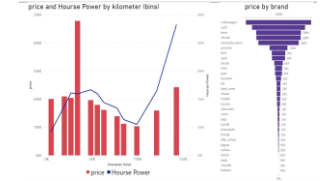


[PowerBI - California houses](#)

I learned how to work on related charts and connect their result. Audience can get maximum information for the dashboard.

Analysis houses price by house size and other factors.

Include some graphs on each dashboard for analysis California houses price. Filter data to get more insight.



[Greater Vancouver Business License](#)

I love data preparation, that's my magic to understand data faster and prepare that for perform exploratory analysis and modeling.

Dataset anomalies:

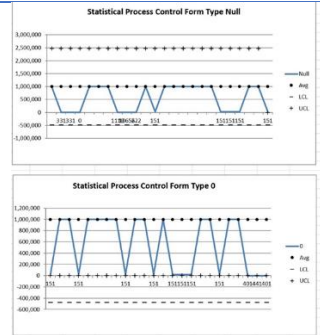
- Blank cells
- Duplicates
- Abbreviations

Data quality assessment (DQA)

Initial assessment:
SME review, research, suggestions by DQ rules.

Vancouver Business License dataset

Includes sort of relevant column. Initial screen of the dataset revealed some anomalies, that has been extensively analyzed. The graph shown SPC.



[Food order](#)

Food ordering process.

Analysis of food ordering process.

Business Analysis

Microsoft Visio

ECS System Use-Cases

Use-Case Name

Actor

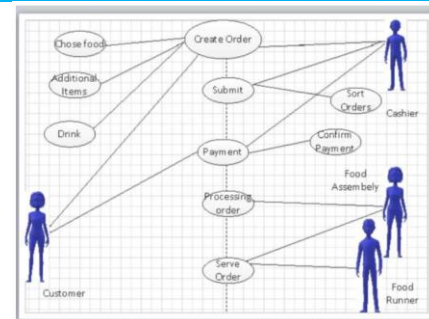
Trigger

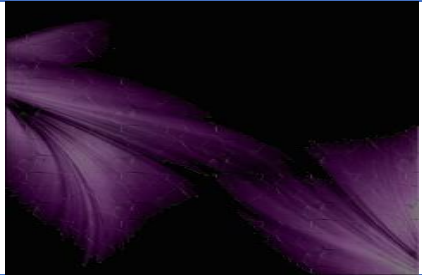




Responses

Check-out Equipment

Actor Action

System Response.



<u>Violet BG</u> I learned about layer, transparency (Opacity), and how to make art by play with them.	Bitmap Adobe photoshop	A personal background for Facebook cover and other pictures background.	
<u>Banafsh BG</u> I learned how to convert photo to shadow, play by adding filter.	Bitmap Adobe photoshop.	A personal background with my name and my shadow	
<u>Kindergarten banner</u> (Rushte Banafsheha) I always love design; I learn how to mix famous logo with my own work (derivative).	Bitmap Adobe photoshop.	I used to work on a kindergarten and design their panel.	
<u>Marry Christmas</u> I learn how to design tree with snow.	Bitmap Adobe photoshop.	That was a Christmas cart I designed.	
<u>Banafsheh</u> I learn how to design name by text, shape and adding texture filter.	Bitmap Adobe photoshop.	Design my name on a leaf to engrave on a wood surface. (personal purpose)	
<u>Binary cover</u> This project taught me how to combine my favorite topics together. Binary ~ programming + Art.	Bitmap Adobe photoshop.	Personal purpose.	