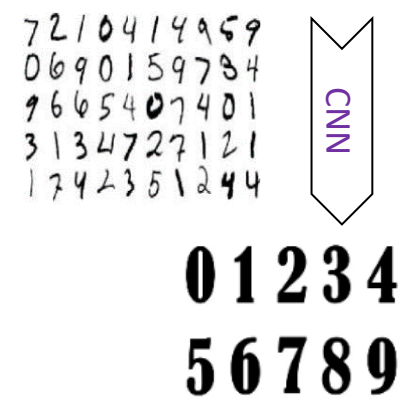
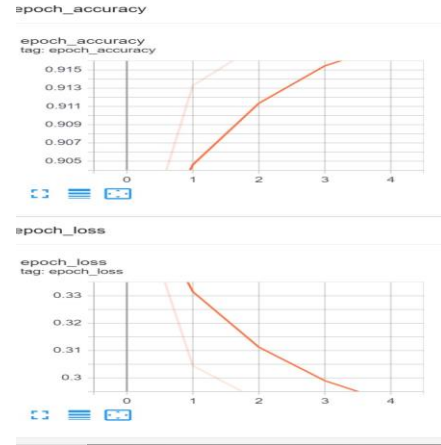
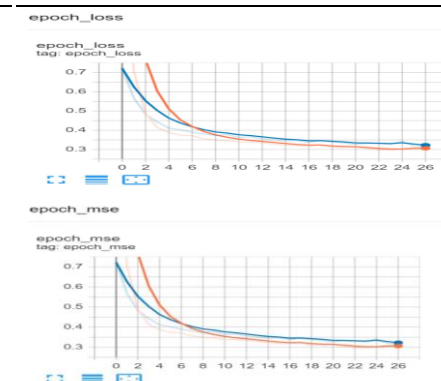
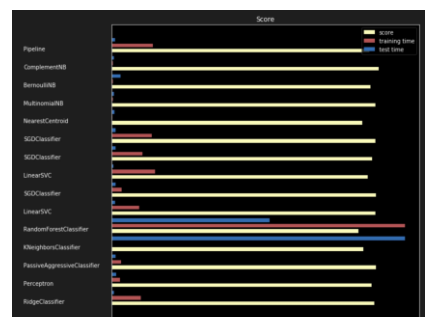
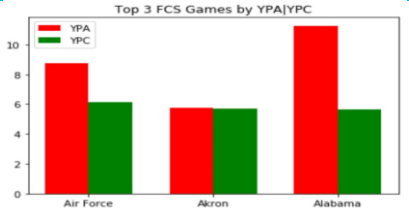

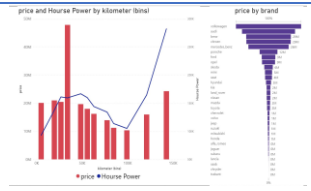
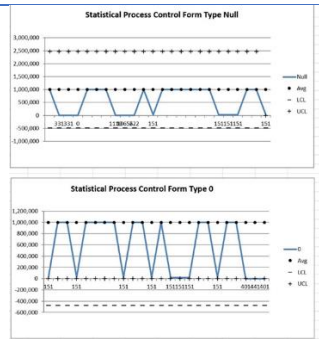
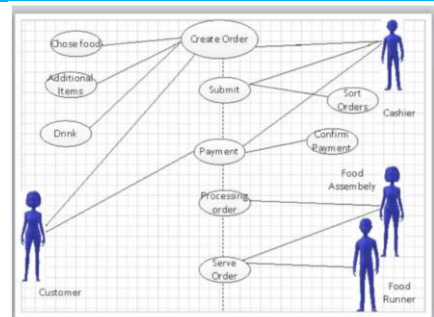
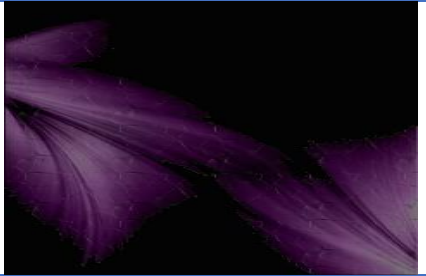






Project	Tools & Methods	Description	Visualization
Digit Recognition - PyTorch These projects taught me how to use the ML library on the single driver node to fit a Neural Network onto the dataset.	<ul style="list-style-type: none"> PyTorch library Apache Spark driver single node 	<ul style="list-style-type: none"> ✓ Data processing ✓ Build a CNN model on MNIST dataset. 	
Digit Recognition - Tensorflow I learned how to use AI and 3 ML libraries to build and register a model with MLflow.	<ul style="list-style-type: none"> TensorFlow library Apache Spark driver single node 	<ul style="list-style-type: none"> ✓ Find the nearest point to recognize the digit from handwritten document. 	
Deep learning: end-to-end by using TensorFlow Keras, Hyperopt and MLflow I learned how to use AI and 3 ML libraries to build and register a model with MLflow.	<ul style="list-style-type: none"> TensorFlow Keras Hyperopt MLflow 	<ul style="list-style-type: none"> ✓ Data processing ✓ develop a deep learning model on Fetch_california_housing dataset to predict California house price in feature. ✓ Register the model in MLflow. 	
Text documents classification by sparse features-plot I learned building model by ML library to document classification.	<ul style="list-style-type: none"> Scikit-learn Scipy.sparse matrix storing features demonstrates various classifiers. 	<ul style="list-style-type: none"> ✓ Build a model by ML library <ul style="list-style-type: none"> Classify document ✓ Using a bag-of-words approach <ul style="list-style-type: none"> Classify topic ✓ Plot 	

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Pipeline for extract and evaluate text-Machine I always like to filter news for myself. 1 st step is extract and evaluate news text.	<ul style="list-style-type: none">Scikit-learn	<ul style="list-style-type: none">✓ Create model to extract and evaluate text on 20 newsgroups dataset.<ul style="list-style-type: none">Automatically get 20 categories																													
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.	<ul style="list-style-type: none">Random Forest modelMLflow Tracking API	<ul style="list-style-type: none">✓ Create a model on a simple dataset.✓ Tracking API<ul style="list-style-type: none">to log the model.✓ Selected model parameters and metrics.	<div><p>▼ Parameters</p><table><thead><tr><th>Name</th><th>Value</th></tr></thead><tbody><tr><td>max_feat</td><td>3</td></tr><tr><td>maxdepth</td><td>6</td></tr><tr><td>num_trees</td><td>100</td></tr></tbody></table><p>▼ Metrics</p><table><thead><tr><th>Name</th><th>Value</th></tr></thead><tbody><tr><td>mse</td><td>3024.3</td></tr></tbody></table></div>	Name	Value	max_feat	3	maxdepth	6	num_trees	100	Name	Value	mse	3024.3																
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ML Hyperopt & SparkTrials: Model This project taught me how to parallel training with ML libraries and Obtain the best.	<ul style="list-style-type: none">SparkTrialsScale Hyperparameter tuning<ul style="list-style-type: none">Hyperopt	<ul style="list-style-type: none">✓ Train models used ML libraries.																													
Predict if an individual's income > \$50,000 I learned binary problem solving by ML library in this project.	<ul style="list-style-type: none">MLlibHyperparameter tuning	<p>Is an income > 50K on each age range?</p> <ul style="list-style-type: none">✓ Using Apache Spark's ML library✓ Investigates binary classification problem.✓ Make predictions and evaluate.																													
Job Analysis On this project I learned the best ways for preparing data professionally for modelling.	<ul style="list-style-type: none">Data processing<ul style="list-style-type: none">Problem statementData cleaningExploratory analysisFeature engineeringMethodology	<ul style="list-style-type: none">✓ Output: Get user expectation (by asking question from user) and recommend some sorted job category with salary range and information.	<div><div><p>3 highest income</p><p>Search by keyword Min/max-Job- Employee Example : Search by keyword: Admin</p></div><div><p>3 lowest income</p></div></div> <table><thead><tr><th></th><th>Classification</th><th>Max-Level</th><th>Min-Level</th></tr></thead><tbody><tr><td>Administrative Manager 3</td><td>> 50</td><td>< 50</td><td>< 50</td></tr><tr><td>Administrative Manager 1</td><td>> 50</td><td>< 50</td><td>< 50</td></tr><tr><td>Administrative Manager 2</td><td>> 50</td><td>< 50</td><td>< 50</td></tr><tr><td>Admin Support 1a</td><td>< 50</td><td>< 50</td><td>< 50</td></tr><tr><td>Admin Support 1b</td><td>< 50</td><td>< 50</td><td>< 50</td></tr><tr><td>Admin Support 2</td><td>< 50</td><td>< 50</td><td>< 50</td></tr></tbody></table>		Classification	Max-Level	Min-Level	Administrative Manager 3	> 50	< 50	< 50	Administrative Manager 1	> 50	< 50	< 50	Administrative Manager 2	> 50	< 50	< 50	Admin Support 1a	< 50	< 50	< 50	Admin Support 1b	< 50	< 50	< 50	Admin Support 2	< 50	< 50	< 50
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<p><u>3 Top FCS Games from 'College Football Data API'</u></p> <p>Visualizing top 3 FCS game live from: api.collegefootballdata.com</p>	<ul style="list-style-type: none"> Data preprocess 	<p>Plays, YPA and YPC summarize by function classified by City.</p> <p>Data processing</p> <ul style="list-style-type: none"> ✓ Load data from api ✓ Plays, YPA and YPC summarize by function. ✓ 3 Top FCS Games ✓ Plot data 	
<p>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.</p> <p><i>That inspired me to work on football data</i></p> <p><u>Introduction of FIFA world cup history</u></p> <p>FIFA world cup history.</p>	<ul style="list-style-type: none"> Related chart 	<ul style="list-style-type: none"> ✓ Heatmap <ul style="list-style-type: none"> Count of the matches played ✓ Table <ul style="list-style-type: none"> information by text ✓ Line chart <ul style="list-style-type: none"> Compare countries in term of number of matches they had played on world cups from 1930 to 2014. 	
<p><u>PowerBI - California houses</u></p> <p>I learned how to work on related charts and connect their result. Audience can get maximum information from the dashboard.</p>	<ul style="list-style-type: none"> Analysis houses price by house size and other factors. 	<p>Include some graphs on each dashboard for analysis California houses price. Filter data to get more insight.</p>	
<p><u>Greater Vancouver Business License</u></p> <p>I love data preparation, that's my magic to understand data faster and prepare that for perform exploratory analysis and modeling.</p>	<ul style="list-style-type: none"> Dataset anomalies: <ul style="list-style-type: none"> Blank cells Duplicates Abbreviations Data quality assessment (DQA) <ul style="list-style-type: none"> Initial assessment: SME review, research, suggestions by DQ rules. 	<p><u>Vancouver Business License dataset</u> Includes sort of relevant column. Initial screen of the dataset revealed some anomalies, that has been extensively analyzed. The graph shown SPC.</p>	
<p><u>Food order</u></p> <p>Food ordering process.</p>	<ul style="list-style-type: none"> Analysis of food ordering process. 	<ul style="list-style-type: none"> ✓ Business Analysis ✓ Microsoft Visio ✓ ECS System Use-Cases <ul style="list-style-type: none"> Use-Case Name Actor Trigger Responses ✓ Check-out Equipment <ul style="list-style-type: none"> Actor Action System Response. 	

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<u>Violet BG</u> I learned about layer, transparency (Opacity), and how to make art by play with them.	<ul style="list-style-type: none"> • Bitmap <ul style="list-style-type: none"> ○ 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.	<ul style="list-style-type: none"> • Bitmap <ul style="list-style-type: none"> ○ Adobe photoshop 	✓ A personal background with my name and my shadow	
<u>Kindergarten banner</u> <i>(Rushte Banafsheha)</i> I always love design; I learn how to mix famous logo with my own work (derivative).	<ul style="list-style-type: none"> • Bitmap <ul style="list-style-type: none"> ○ Adobe photoshop 	✓ I used to work in a kindergarten and design their panel.	
<u>Merry Christmas</u> I learn how to design tree with snow.	<ul style="list-style-type: none"> • Bitmap <ul style="list-style-type: none"> ○ 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.	<ul style="list-style-type: none"> • Bitmap <ul style="list-style-type: none"> ○ Adobe photoshop 	✓ Design my name on a leaf to engrave on a wood surface. <ul style="list-style-type: none"> ▪ (personal purpose) 	
<u>Binary cover</u> This project taught me how to combine my favorite topics together. Binary ~ programming + Art.	<ul style="list-style-type: none"> • Bitmap <ul style="list-style-type: none"> ○ Adobe photoshop 	▪ Personal purpose.	