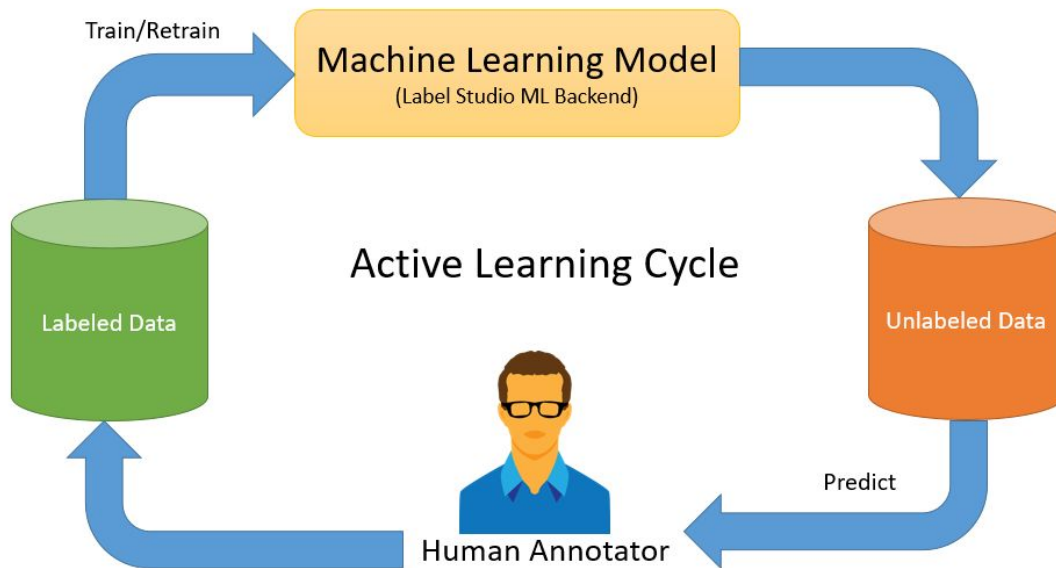


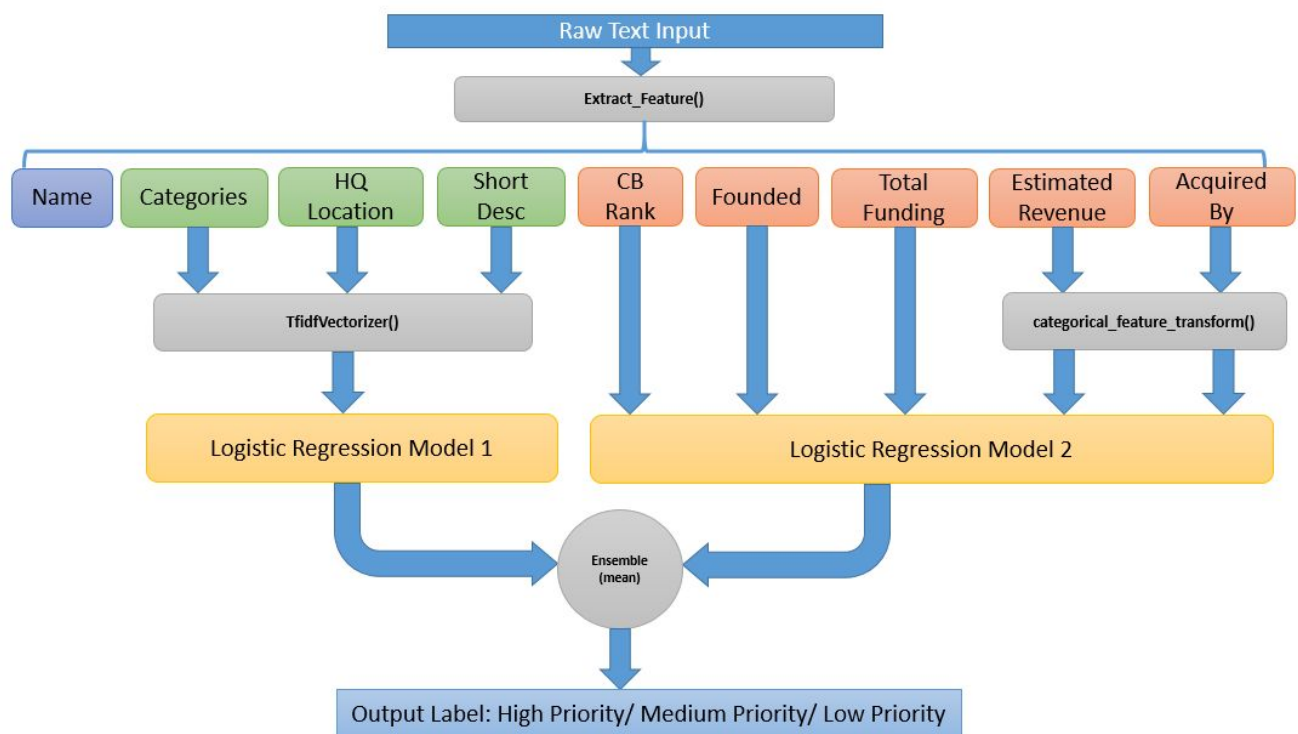
## Task 2: Target Classification Model with Label Studio Active Learning

Project Repo: [https://github.com/Oh91/Abelling\\_Sales\\_Project](https://github.com/Oh91/Abelling_Sales_Project)



Active Learning Cycle of Label Studio

The Proposed Model for classifying priority of the target companies:



## Project Steps:

1. Implement the proposed model with Label Studio ML API ([model source](#))
2. Create ML backend with the implemented model and start ML backend server -

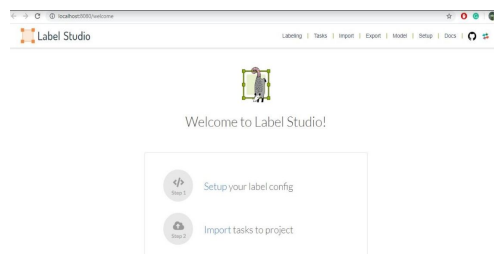
```
C:\WINDOWS\system32\cmd.exe - label-studio-ml start my_ml_backend
(base) C:\Users\Ohida Amin Ohi>cd C:\Users\Ohida Amin Ohi\Desktop\label-studio-master
(base) C:\Users\Ohida Amin Ohi\Desktop\label-studio-master>label-studio-ml init my_ml_backend --script label_studio/ml/examples/abelling_model.py --force
(base) C:\Users\Ohida Amin Ohi\Desktop\label-studio-master>label-studio-ml start my_ml_backend
* Serving Flask app "label_studio.ml.api" (lazy loading)
* Environment: production
  WARNING: Do not use the development server in a production environment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://0.0.0.0:9090/ (Press CTRL+C to quit)
```

3. Run the project with connecting Label Studio ML backend -

```
(base) C:\Users\Ohida Amin Ohi>cd C:\Users\Ohida Amin Ohi\Desktop\label-studio-master
(base) C:\Users\Ohida Amin Ohi\Desktop\label-studio-master>label-studio start abelling_project --init --template text_classification --ml-backends http://localhost:9090 --force
c:\users\ohida amin ohi\desktop\label-studio-master\label_studio\examples\text_classification\config.xml label config copied to .\abelling_project\config.xml
.\abelling_project\tasks.json input path has been created with empty tasks.
.\abelling_project\completions output dir already exists. Clear it.

Label Studio has been successfully initialized. Check project states in .\abelling_project
Start the server: label-studio start .\abelling_project
Start browser at URL: http://localhost:8080/welcome
* Serving Flask app "label_studio.server" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
[2020-05-27 21:49:05,218] [werkzeug] [INFO] * Running on http://0.0.0.0:8080/ (Press CTRL+C to quit)
[2020-05-27 21:49:16,015] [werkzeug] [INFO] 127.0.0.1 - - [27/May/2020 21:49:16] "[37mGET /welcome HTTP/1.1[0m" 200 -
[2020-05-27 21:49:16,134] [werkzeug] [INFO] 127.0.0.1 - - [27/May/2020 21:49:16] "[36mGET /static/css/reset.css HTTP/1.1[0m" 304 -
```

4. Welcome window appears -



## 5. Setup Label Config - Labeling Config

```
1 <View>
2
3   <Text name="text" value="$text"></Text>
4
5   <Choices name="Output" toName="text" choice="single">
6
7     <Choice value="High Priority"></Choice>
8
9     <Choice value="Medium Priority"></Choice>
10
11    <Choice value="Low Priority"></Choice>
12
13  </Choices>
14
15 </View>
```

## 6. Import Data -

Import status

Tasks created: 865

Completions created: 0

Predictions created: 0

Duration: 0.42 sec

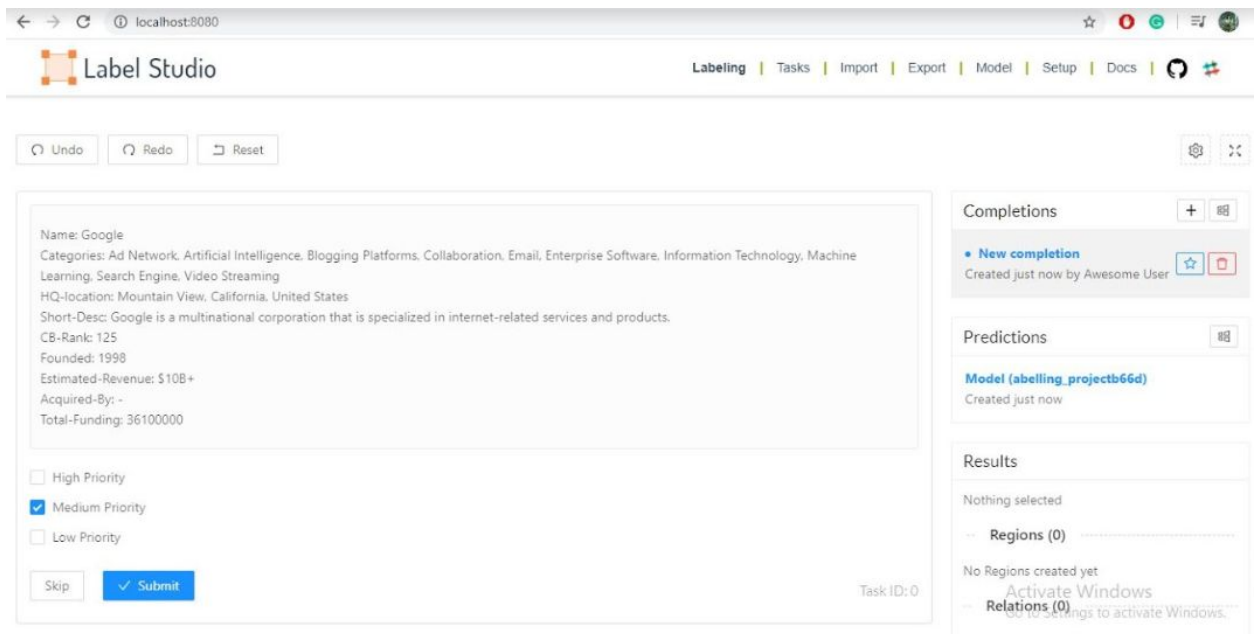
### Start Labeling

## Explore Tasks

Close

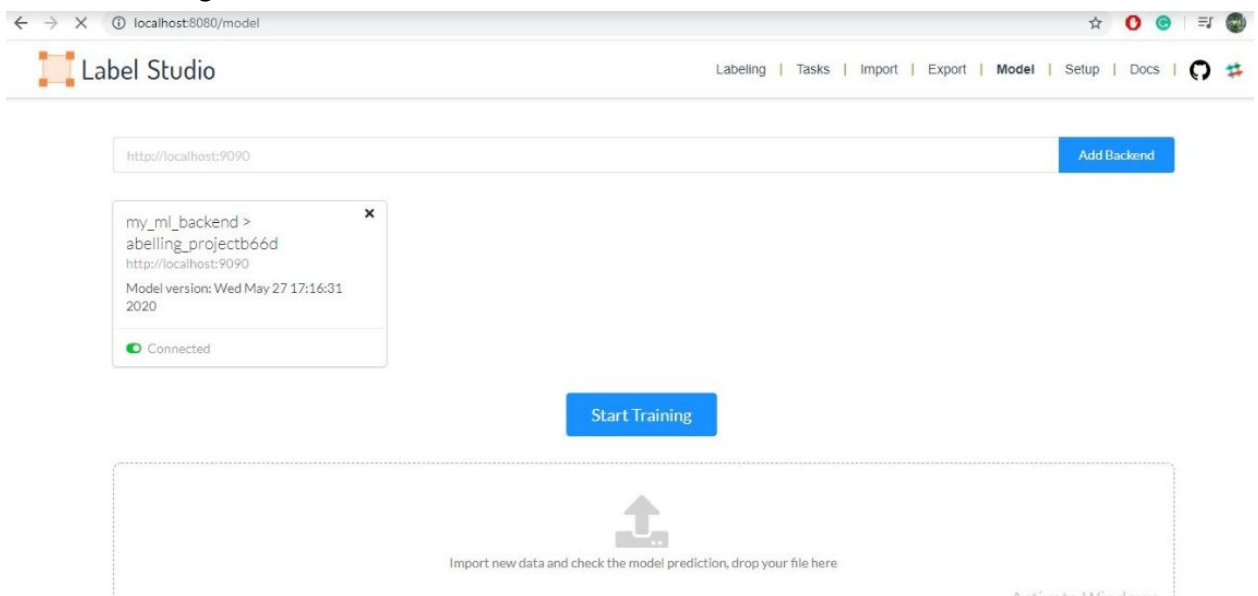
```
1 {
2   "0": {
3     "id": 0,
4     "data": {
5       "text": "Name: Google\nCategories: Ad Network, Artificial Intelligence, Blogging Platforms, Collaboration, Email, Enterprise So
6     }
7   },
8   "1": {
9     "id": 1,
10    "data": {
11      "text": "Name: uBiome\nCategories: Health Care, Machine Learning, Quantified Self\nHQ-location: San Francisco, California, Unit
12    }
13  },
14  "2": {
15    "id": 2,
16    "data": {
17      "text": "Name: Tara AI\nCategories: Artificial Intelligence, Developer Tools, Enterprise Software, Information Technology, Mach
18    }
19  },
20  "3": {
21    "id": 3,
22    "data": {
23      "text": "Name: Text IQ\nCategories: Artificial Intelligence, Compliance, Enterprise Software, Information Technology, Machine L
24    }
25  },
26 }
```

## 7. Start Labeling -



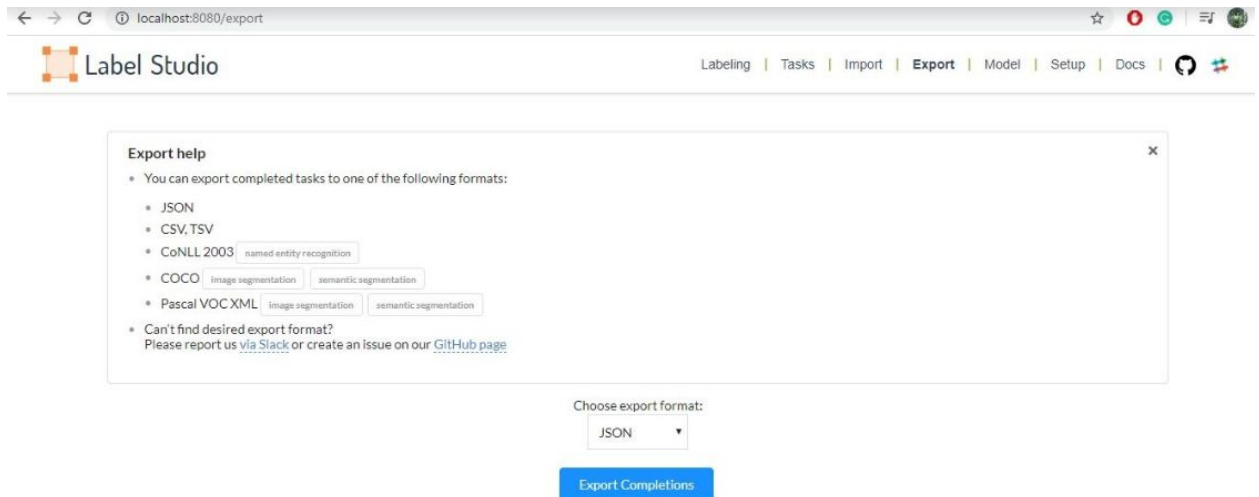
Labeling with prediction from the initialized model

## 8. After Labeling a few data, train the model -



9. To utilize active learning feature of label studio, we can repeat the process 7 and 8.

10. Finally, we can export the labelled data from label studio in any of our desired format (JSON/CSV/...) -



```
1 [
2 {
3   "completions": [
4     {
5       "id": 1,
6       "lead_time": 74.042,
7       "result": [
8         {
9           "from_name": "Output",
10          "id": "M20sup8R5T",
11          "to_name": "text",
12          "type": "choices",
13          "value": {
14            "choices": [
15              "High Priority"
16            ]
17          }
18        }
19      ]
20    }
21  ],
22  "data": {
23    "text": "Name: Google\nCategories: Ad Network, Artificial Intelligence, Blogging Platforms, Collaboration, Email, Enterprise Software.
24  },
```