

Installation Prerequisites

This project is a **Data Analytics Application** built using a **Tkinter GUI frontend** and a **Django backend**, managed with **Conda** for environment setup and reproducibility.

Before running the application, make sure you have the following installed and configured on your system:

Requirements

- Python 3.10
- Anaconda or Miniconda (for Conda environment management)

Environment Setup

1. Open **Anaconda Prompt** (or any terminal with Conda initialized).
2. Confirm Conda is installed:

```
conda --version
```

3. Navigate to the directory containing the *env_setup.yml* file.
4. Create the environment using:

```
conda env create -f env_setup.yml
```

The *env_setup.yml* includes the following libraries:

pandas==2.2.3, numpy==1.26.4, matplotlib==3.9.2, scikit-learn==1.4.2, Django==5.1.4, djangoestframework, requests, catboost==1.2.7, xgboost==2.1.2, tensorflow==2.16.1, statsmodels==0.14.4, customtkinter, seaborn

5. Activate the environment:

```
conda activate oopEnv
```

Running the Application

Backend

1. Navigate to the *scripts* folder:

```
cd "C:\Users\YOUR_USERNAME\Path\To\data-analytics\scripts"
```

2. Start the Django backend server:

```
run_backend.bat
```

This will activate the environment and start the Django development server at:

<http://127.0.0.1:8000/>

Frontend

1. From the same *scripts* folder, run the frontend GUI:

```
run_frontend.bat
```

This will launch the Tkinter desktop application.