CharityML Project

Description

CharityML is a fictitious charity organization aiming to identify potential donors efficiently. This project uses supervised learning algorithms to predict which individuals are most likely to donate, reducing mailing costs and optimizing outreach.

Requirements

Software

- **Python 3.10+** (Anaconda recommended)
- **Jupyter Notebook**

Python Libraries

Make sure the following libraries are installed:

```
pip install autogluon==1.0.0
pip install beautifulsoup4==4.12.3
pip install collection==0.1.6
pip install matplotlib==3.8.2
pip install pillow==10.2.0
pip install pandas==2.1.4
pip install numpy==1.26.3
pip install seaborn==0.13.2
pip install mxnet==1.9.1
pip install bokeh==2.0.1
pip install boto3==1.34.34
pip install datasets==2.16.1
pip install ipykernel==6.29.0
pip install ipython==8.20.0
pip install Jinja2==3.1.3
pip install nltk==3.8.1
pip install pyarrow==15.0.0
pip install requests==2.28.2
pip install scikit-learn==1.4.0
pip install scipy==1.12.0
pip install xgboost==2.0.3
```

Running the Project

1. Clone the repository or download the files.

2. Open the Jupyter Notebook:

```
jupyter notebook
```

3. Load the dataset provided (`census_data.csv` or similar).
4. Run the notebook cells step by step to:
5. Explore the data
6. Preprocess and select features
7. Train models and evaluate performance
8. Identify the best-performing model