p3_project

Public

1 Branch 0 Tags Go to file t Go to file Add file Code

atekajared Update README.md

66f4e8f · 9 minutes ago

Presentatio...	Phase 3 projects c...	1 hour ago
README.md	Update README.md	9 minutes ago
bigml_59c2...	Phase 3 projects c...	1 hour ago
project.ipynb	Phase 3 projects c...	1 hour ago

No description, website, or topics provided.

Readme
Activity
0 stars
0 watching
0 forks

Releases

eleases published
e a new release

Packages

No packages published
Publish your first package

Languages

Jupyter Notebook 100.0%

README

Customer Churn Prediction Project

Overview

This project builds a machine learning model to predict customer churn using historical telecom customer data. The goal is to identify customers who are likely to leave so that proactive retention strategies can be applied.

The notebook covers the full workflow including data exploration, preprocessing, model training, and evaluation.

Objectives

- Analyze customer behavior data
- Prepare and preprocess features for modeling
- Train a classification model to predict churn
- Evaluate model performance with appropriate metrics
- Provide a baseline model for further improvement

Dataset

The dataset contains customer-level information such as:

- Usage statistics
- Service plan features

- Customer support interactions
- Account attributes
- Churn label (target variable)

Methods

The project follows these steps:

1. Data loading and inspection
2. Exploratory data analysis
3. Data cleaning and preprocessing
4. Feature encoding and scaling
5. Train/test split
6. Model training (Logistic Regression baseline)
7. Model evaluation using classification metrics

Tools and Libraries

- Python
- pandas
- numpy
- scikit-learn
- matplotlib
- seaborn

How to Run

1. Open the Jupyter notebook file.
2. Install dependencies if needed:

```
pip install pandas numpy scikit-learn matplotlib seaborn
```

3. Ensure the dataset file is in the correct directory.
4. Run the notebook cells in order.

Results

The project produces a baseline churn prediction model and evaluation metrics. The results can be used to guide future model improvements and deployment.

Future Improvements

- Try additional machine learning models
- Perform hyperparameter tuning
- Add cross-validation
- Apply class imbalance techniques
- Create a deployment-ready prediction pipeline

Author

Ateka JM

Add your name and details here.