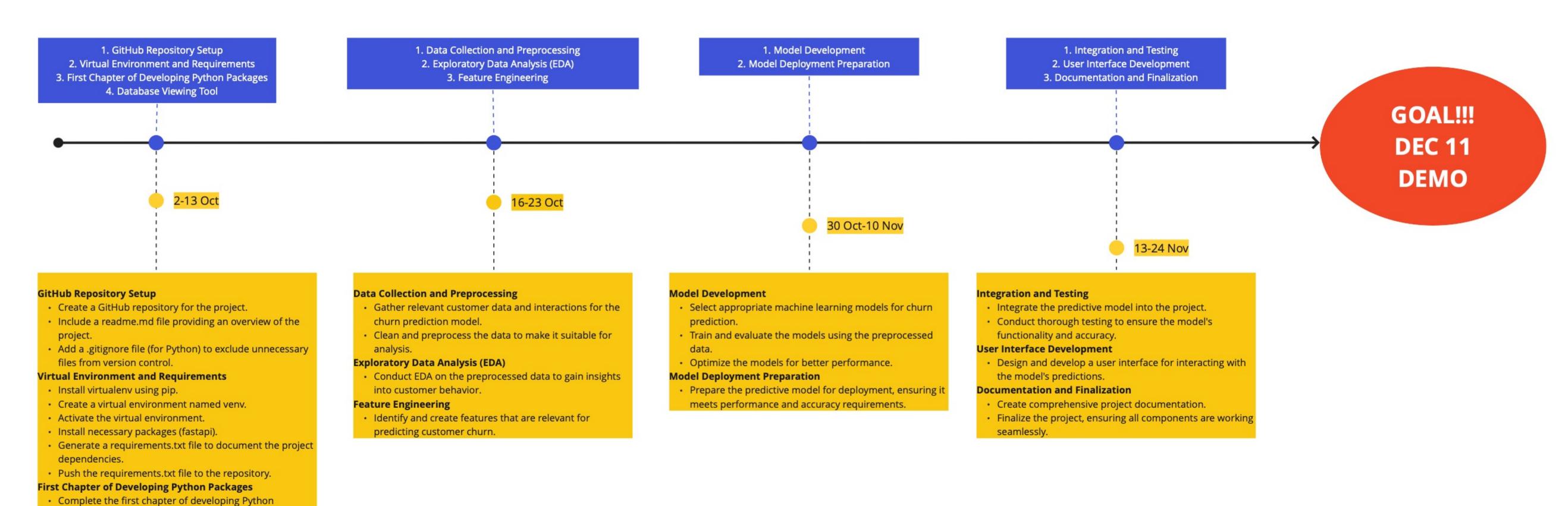# Customer Churn Prediction Roadmap

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1. GitHub Repository Setup
2. Virtual Environment and Requirements
3. First Chapter of Developing Python Packages
4. Database Viewing Tool

1. Data Collection and Preprocessing
2. Exploratory Data Analysis (EDA)
3. Feature Engineering

1. Model Development
2. Model Deployment Preparation

1. Integration and Testing
2. User Interface Development
3. Documentation and Finalization

GOAL!!! DEC 11 DEMO

2-13 Oct

16-23 Oct

30 Oct-10 Nov

13-24 Nov

GitHub Repository Setup
- Create a GitHub repository for the project.
- Include a readme.md file providing an overview of the project.
- Add a .gitignore file (for Python) to exclude unnecessary files from version control.

Virtual Environment and Requirements
- Install virtualenv using pip.
- Create a virtual environment named venv.
- Activate the virtual environment.
- Install necessary packages (fastapi).
- Generate a requirements.txt file to document the project dependencies.
- Push the requirements.txt file to the repository.

First Chapter of Developing Python Packages
- Complete the first chapter of developing Python packages to ensure the project follows best practices.

Database Viewing Tool
- Install and set up DBeaver for a user-friendly database view.

Data Collection and Preprocessing
- Gather relevant customer data and interactions for the churn prediction model.
- Clean and preprocess the data to make it suitable for analysis.

Exploratory Data Analysis (EDA)
- Conduct EDA on the preprocessed data to gain insights into customer behavior.

Feature Engineering
- Identify and create features that are relevant for predicting customer churn.

Model Development
- Select appropriate machine learning models for churn prediction.
- Train and evaluate the models using the preprocessed data.
- Optimize the models for better performance.

Model Deployment Preparation
- Prepare the predictive model for deployment, ensuring it meets performance and accuracy requirements.

Integration and Testing
- Integrate the predictive model into the project.
- Conduct thorough testing to ensure the model's functionality and accuracy.

User Interface Development
- Design and develop a user interface for interacting with the model's predictions.

Documentation and Finalization
- Create comprehensive project documentation.
- Finalize the project, ensuring all components are working seamlessly.