Instructions for Setting Up and Running the Customer Churn Prediction Model

Prerequisites

- Python 3.10.9 and above installed on your system.
- Basic familiarity with Python and command line interfaces.

Step 1: Environment Setup

1. **Clone or Download the Repository**: Ensure you have the `Model_Deployment.py` and `requirements.txt` files from the repository.
2. **Create a Python Virtual Environment (Optional but Recommended)**:
    - Open your command line interface (CLI).
    - Navigate to the project directory.
    - Run `python -m venv venv` to create a virtual environment named 'venv'.
    - Activate the environment:
        - Windows: `venv\Scripts\activate`
        - MacOS/Linux: `source venv/bin/activate`
3. **Install Dependencies**:
    - In the project directory, run `pip install -r requirements.txt` to install the required Python packages.

Step 2: Running the Model Deployment Script

1. **Start the Web Application**:
    - While in the project directory and with the virtual environment activated, run `streamlit Model_Deployment.py`.
    - This will start the web server and host your application.
2. **Access the Web Application**:
    - Open a web browser.
    - Go to the address provided in the command line output (typically something like `http://127.0.0.1:5000/`).
    - You should now see the web interface for customer churn prediction.

Step 3: Using the Application

1. **Input Customer Data**:
    - Follow the instructions on the web page to input the customer data. This involves filling out a form or uploading a file, depending on your application's design.
2. **Submit for Prediction**:
    - Submit the data using the provided button or interface.
    - The model will process the input and display the prediction.

Troubleshooting

- If you encounter any issues with package versions, refer to the `requirements.txt` file and ensure you have the correct versions installed.
- Make sure all necessary data files, if any, are placed in the correct directories as expected by the script.
- For any issues related to the web server not starting, check the console output for error messages and ensure the port being used is not already occupied.

Support

For further assistance, please contact [jayyoges@buffalo.edu] or [rpatel38@buffalo.edu].