

# SMS Spam Detector

## Description

This is a web application that allows users to input a message and determine whether it is spam or not spam. It leverages machine learning for message classification.

## Technologies Used

- **Python:** Used for data processing and machine learning model development. This can be done in environments like Jupyter Notebook or Google Colab.
- **Flask:** The web framework used to build the web application. Please refer to requirements.txt for specific Flask dependencies.
- **Render:** Suggested platform for deploying the web application.

## Prerequisites

To run this application, ensure you have the following libraries installed:

- numpy
- pandas
- matplotlib
- seaborn
- scikit-learn (sklearn)
- nltk
- TensorFlow
- Flask
- Basic understanding of HTML and CSS for web interface development.

You can install the Python libraries using pip, for example:

```
pip install numpy pandas matplotlib seaborn scikit-learn nltk tensorflow flask
```

It's recommended to install dependencies from a requirements.txt file if provided.

## How to Run

1. **Clone the repository** (or paste all files into your code editor's project directory).
2. **Open your terminal or command prompt.**
3. **Navigate to the project directory** where app.py is located.
4. **Run the Flask application** using the command:  
`python app.py`

5. **Access the web application** in your browser by visiting the local address displayed in the terminal (usually `http://127.0.0.1:5000/`).

## Deployment

For deployment, you can visit the [Render website](#) and follow their instructions to deploy your Flask web application.

**Visit :**