Project Proposal: SMS Classifier

Project Overview:

The SMS Spam Classifier project aims to develop a machine learning model capable of distinguishing between spam and non-spam (ham) SMS messages. This project addresses the issue of unwanted SMS spam and provides a solution for filtering out spam messages.

Objectives:

1. Develop a machine learning model to classify SMS messages as spam or ham.
2. Collect and preprocess a dataset of labeled SMS messages for training and testing the classifier.
3. Implement machine learning algorithms for text classification, such as Naive Bayes or Support Vector Machines (SVM).
4. Train and evaluate the performance of the classifier using standard metrics.
5. Deploy the trained model for real-time classification of incoming SMS messages.

Methodology:

1. Data Collection and Preprocessing: Gather a dataset of SMS messages and preprocess the data to remove noise and tokenize text.
2. Model Development: Implement and train a machine learning model using algorithms suitable for text classification.
3. Model Evaluation: Evaluate the performance of the trained model using accuracy, precision, recall, and F1-score metrics.
4. Deployment: Deploy the trained model as a real-time SMS spam classifier for filtering incoming messages.

Expected Deliverables:

1. Trained machine learning model for SMS spam classification.
2. Evaluation report detailing the performance of the classifier on test data.
3. Documentation and codebase for replicating the project, including data preprocessing steps, model implementation, and deployment instructions.

Timeline:

- Week 1: Data collection and preprocessing.
- Week 2: Model development and training.
- Week 3: Model evaluation and fine-tuning.
- Week 4: Deployment and documentation.

Budget:

The project budget includes expenses for data acquisition (if necessary) and computing resources for model training.

Conclusion:

The SMS Spam Classifier project offers a practical solution for identifying and filtering out unwanted SMS spam messages. By leveraging machine learning techniques, we aim to develop an effective classifier capable of improving user experience and reducing the impact of SMS spam within a one-month timeframe.