**PROJECT 1:: BUILDING A SMARTER AI-POWERED SPAM CLASSIFIER**

**Problem Definition::**

The problem is to build an AI-powered spam classifier that can accurately distinguish between spam and non-spam messages in emails or text messages. The goal is to reduce the number of false positives (classifying legitimate messages as spam) and false negatives (missing actual spam messages) while achieving a high level of accuracy.

**•Design::** Develop an Al-powered spam classifier using NLP and ML techniques.

**•Applicability::** Enhance email/text communication by automatically identifying spam.

**•Technology::** NLP and ML algorithms for spam detection.

**•Coding::** Python with NLP libraries, TF-IDF and ML models.

**•Architecture::** An AI-guard for messages that analyses and categorizes content.

•**Transformation::** Revolutionizes digital communication by filtering out spam.

**•Real-World Analogy::** A smart bouncer distinguishing between valuable guests and party crashers.

**Project Implementation Steps ::**

Step1: Install Python or Anaconda Navigator.

Step2: Import the NLP and Ml Algorithms and required packages.

Step3: The AI train using **SMS\_Spam\_Detection.CSV** Dataset.

Step4: Pre-processing and Exploring the Dataset.

Step5: Build word cloud to see which message is spam and which is not.

Step6: Remove the stop words and punctuations.

Step7: Convert the text data into vectors.

**We are implement our AI program by this data set::** [**https:://www.kaggle.com/datasets/uciml/sms-spam-collection-dataset**](https://www.kaggle.com/datasets/uciml/sms-spam-collection-dataset)