1 Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

PROBLEM

The task is to optimize the spam filtering process using machine learning techniques. The goal is to create a model that can accurately classify emails as either spam or not spam, based on their content and other features.

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.
- Go for volume.
- If possible, be visual.

2 Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

v.agalya

Use a combination of machine learning algorithms: Instead of relying on a single algorithm, you can use a combination of different algorithms, such as Naive Bayes, SVM, and Random Forests, to improve the overall performance of the spam filter.

Use deep learning models: Deep learning models, such as Convolutional Neural Networks (CNN) and Recurrent Neural Networks (RNN), have shown promising results in text classification tasks, including spam filtering.

k.vigneshwaran

Use transfer learning: Transfer learning involves using pre-trained models, such as BERT and GPT, to improve the performance of the spam filter by leveraging the knowledge learned from large-scale datasets.

Incorporate user feedback: Allow users to flag messages as spam or not spam, and incorporate this feedback into the machine learning model to improve its accuracy over time.

j.vinoth

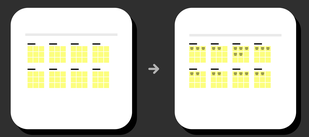
Use unsupervised learning: Unsupervised learning algorithms, such as clustering and anomaly detection, can be used to identify unusual patterns in the data that may indicate spam messages.

Use natural language processing (NLP): NLP techniques, such as sentiment analysis and named entity recognition, can be used to extract more meaningful features from the messages and improve the accuracy of the spam filter.

s.abinash

Consider the context: Consider the context in which the message was received, such as the time of day, the sender's reputation, and the user's history, to improve the accuracy of the spam filter.

Use ensemble learning: Ensemble learning involves combining multiple models to improve the overall performance of the spam filter. For example, you can combine the predictions of several machine learning models to make the final decision on whether a message is spam or not.



3 Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

Active learning is a technique where the model selects the most informative examples to be labeled by a human annotator. This could be used to improve the accuracy of the spam filter by focusing on the most challenging examples that the model is struggling to classify.

Compare the performance of different machine learning algorithms for spam filtering, such as Naive Bayes, Support Vector Machines (SVM), Random Forests, and Neural Networks. Analyze the strengths and weaknesses of each algorithm and identify the best algorithm for a given dataset

4 Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes