BUILDING A SMARTER AI-POWERED SPAM CLASSIFIER

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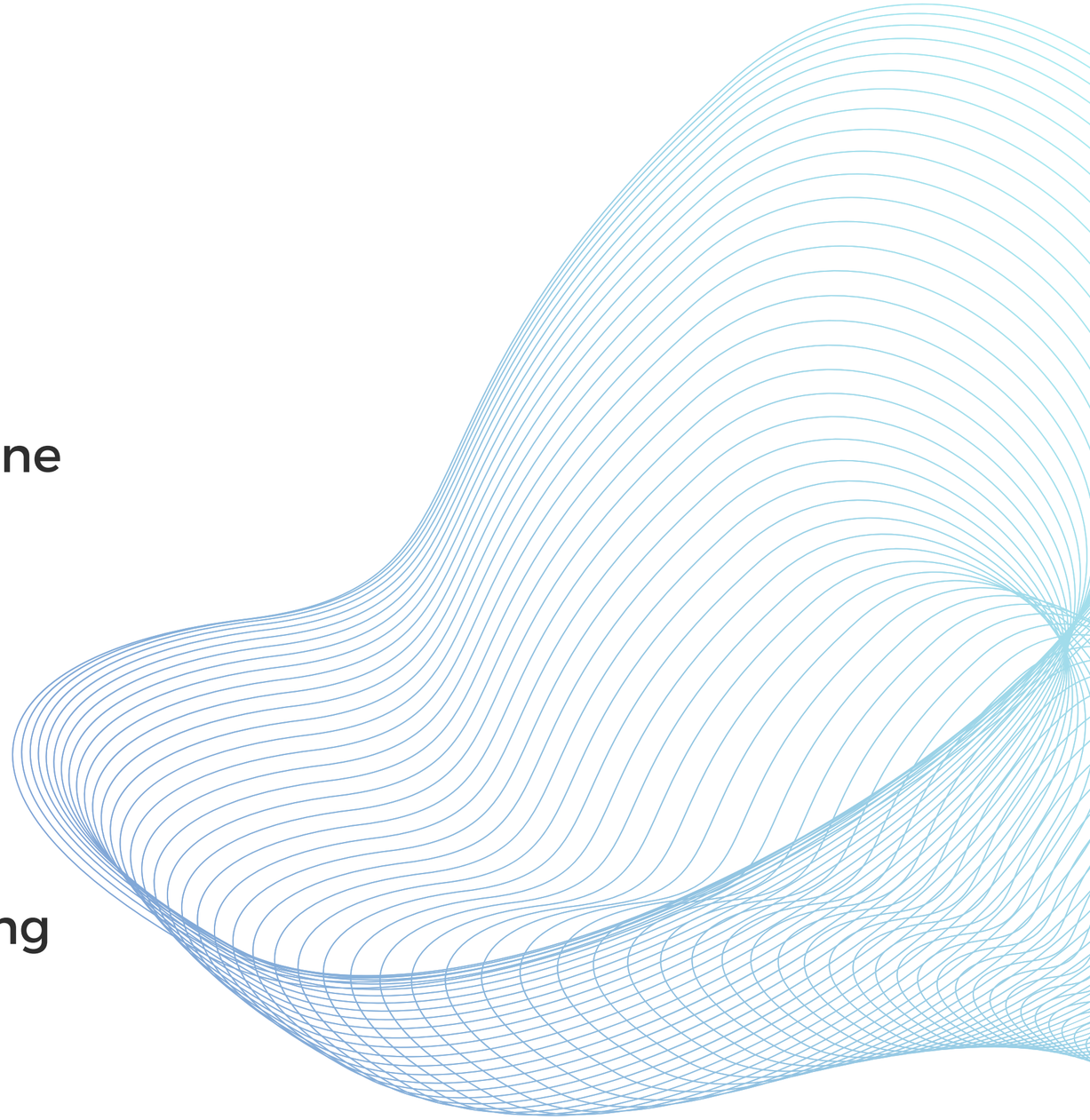
INTRODUCTION

- Building a smarter AI-powered spam classifier involves using advanced machine learning techniques and a large, labeled dataset.
- Remember that building a smarter AI-powered spam classifier is an ongoing process that requires continuous improvement and adaptation to changing soam tactics



PROBLEM DEFINITION

- The problem is to build an AI-powered 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 and false negatives while achieving a high level of accuracy

DESIGN THINKING

Data collection

We will need a dataset containing labeled examples of spam and nonspam messages. We can use a Kaggle dataset for this purpose.

Data preprocessing

The text data needs to be cleaned and preprocessed. This involves removing special characters, converting text to lowercase, and tokenizing the text into individual words.

Feature Extraction

We will convert the tokenized words into numerical features using techniques like TF-IDF(Term Frequency- Inverse Document Frequency)

Evaluation

We will measure the model's performance using metrics like accuracy, precision, recall and F1-score.

Model Selection

We can experiment with various machine learning algorithms such as Naive Baayes, Support Vector Machines and more advanced techniques like deep learning using neural networks.

Iterative Improvement

We will fine-tune the model and experiment with hyperparameters to improve its accuracy

SMS SPAM COLLECTION

- The SMS spam collection is a set of SMS tagged messages that have been collected for SMS spam research.
- It contains one set of SMS messages in English of 5,574 messages, tagged according being ham(legitimate) or spam
- We can also manually label the SMS messages as either spam or not spam.This is a time consuming but crucial step.

SPAM AND HAM MESSAGES

Here are some of the spam and ham messages

ham	Sorry my roommates took forever, it ok if I come by now?
ham	Ok lar i double check wif da hair dresser already he said wun cut v short. He said will cut until i look nice.
spam	As a valued customer, I am pleased to advise you that following recent review of your Mob No. you are aw
ham	Today is \song dedicated day..\" Which song will u dedicate for me? Send this to all ur valuable frnds but
spam	Urgent UR awarded a complimentary trip to EuroDisinc Trav, Aco&Entry41 Or 滄1000. To claim txt DIS to 8
spam	Did you hear about the new \Divorce Barbie\"? It comes with all of Ken's stuff!"
ham	I plane to give on this month end.
ham	Wah lucky man... Then can save money... Hee...
ham	Finished class where are you.
ham	HI BABE IM AT HOME NOW WANNA DO SOMETHING? XX
ham	K..k:)where are you?how did you performed?
ham	U can call me now...
ham	I am waiting machan. Call me once you free.
ham	Thats cool. i am a gentleman and will treat you with dignity and respect.
ham	I like you peoples very much:) but am very shy pa.
ham	Does not operate after <#> or what
ham	Its not the same here. Still looking for a job. How much do Ta's earn there.
ham	Sorry, I'll call later

CONCLUSION

Remember that the effectiveness of your AI-powered spam classifier will depend on the quality of your data, feature engineering and the chosen machine learning or deep learning techniques.

Continuously improving and adapting the model is crucial to stay ahead of evelving spam tactics.