

Spam Detection Model Performance Report

Executive Summary

Test Overview:

- Models Tested: Enhanced Transformer, SVM, CatBoost
- SPAM Categories: 5
- HAM Categories: 5
- Examples per Category: 5
- Total Tests: 50 per model

This report analyzes spam detection model performance across diverse content types.

Enhanced Transformer - Summary

Metric	Value
Overall Accuracy	76.0%
SPAM Detection Accuracy	96.0%
HAM Detection Accuracy	56.0%
Number of Perfect Categories	4

Perfectly Works On

Type	Categories
SPAM	Financial Scams Product Promotion Romance/Dating Health/Medical
HAM	None

Not Recommended (Low Accuracy)

Type	Categories
SPAM	None
HAM	Business Professional Personal Communication E-commerce Legitimate Educational

Best For (High Accuracy Categories)

Type	Categories
SPAM	Financial Scams Product Promotion Romance/Dating Health/Medical
HAM	Banking Legitimate Business Professional

SVM - Summary

Metric	Value
Overall Accuracy	80.0%
SPAM Detection Accuracy	96.0%
HAM Detection Accuracy	64.0%
Number of Perfect Categories	4

Perfectly Works On

Type	Categories
SPAM	Financial Scams Phishing Product Promotion Romance/Dating
HAM	None

Not Recommended (Low Accuracy)

Type	Categories
SPAM	None
HAM	Banking Legitimate E-commerce Legitimate

Best For (High Accuracy Categories)

Type	Categories
SPAM	Financial Scams Phishing Product Promotion Romance/Dating
HAM	Business Professional Personal Communication

CatBoost - Summary

Metric	Value
Overall Accuracy	62.0%
SPAM Detection Accuracy	56.0%
HAM Detection Accuracy	68.0%
Number of Perfect Categories	0

Perfectly Works On

Type	Categories
SPAM	None
HAM	None

Not Recommended (Low Accuracy)

Type	Categories
SPAM	Financial Scams Phishing Romance/Dating Health/Medical
HAM	Banking Legitimate E-commerce Legitimate

Best For (High Accuracy Categories)

Type	Categories
SPAM	Product Promotion Financial Scams
HAM	Business Professional Personal Communication