

The background is a solid red color. In the top-left corner, there is a large yellow circle. In the top-right corner, there is a smaller white circle. In the bottom-right corner, there is a medium-sized yellow circle.

TECHNOLOGY HACKATHON

**Gen AI-Based Email
Classification and OCR**

Team Name: Ctrl-Alt-Generate

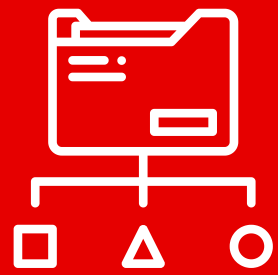
Problem Statement

The Commercial Bank Lending Service teams receive high volumes of diverse email requests, often with attachments, requiring manual triage by "Gatekeepers" to classify and extract key information. This process is time-consuming, inefficient, and prone to errors, especially when the volume is large.

Solution

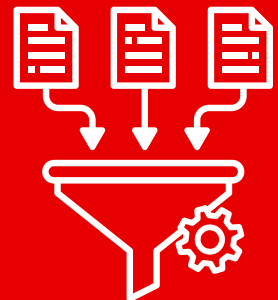
Developing a Gen AI-powered solution that automates email classification, context-based data extraction, and service request routing, improving efficiency, accuracy and turnaround time by reducing manual effort and ensuring precise request routing.

Key capabilities



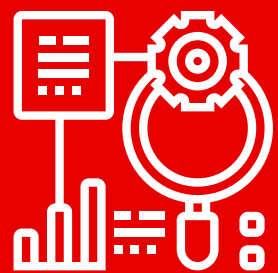
Email Classification

Automatically classify emails into predefined request types and subtypes based on the sender's intent using advanced NLP models.



Data Extraction

Extract key data points (e.g., deal name, amount, expiration date) from both email content and attachments, tailored to each request type.



Prioritization based Extraction

Implement customizable rules to prioritize email content for request identification & extract data, such as numerical fields from attachments.

Implementation



Results

A sample email input about a term Loan service request

mail_file * required

string(\$binary)

The file to upload

Choose File

sample_email.eml

Execute

Clear

Responses

Curl

```
curl -X 'POST' \
  'http://127.0.0.1:8000/singlemail/' \
  -H 'accept: application/json' \
  -H 'Content-Type: multipart/form-data' \
  -F 'mail_file=@sample_email.eml;type=message/rfc822'
```

Request URL

```
http://127.0.0.1:8000/singlemail/
```

Server response

Code	Details
200	<div><div>Response body</div><div><pre>{ "response": { "category": "Loan Request", "primary_request": { "request_type": "Term Loans", "sub_request_type": null, "confidence_score": 1, "loan_amount": 565000, "deal_name": null, "expiration_date": null, "justification": "The email explicitly states the need for a 'Term Loan' for business expansion and specifies the desired amount." }, "additional_requests": [], "duplicate_email": false } }</pre></div><div><div></div><div>Download</div></div></div>

Results

An email chain

mail_file * required

The file to upload

string(\$binary)

Choose File

SBA Line of Credit Increase.eml

Execute

Clear

Responses

Curl

```
curl -X 'POST' \
'http://127.0.0.1:8000/singlemail/' \
-H 'accept: application/json' \
-H 'Content-Type: multipart/form-data' \
-F 'mail_file=@SBA Line of Credit Increase.eml;type=message/rfc822'
```

Request URL

```
http://127.0.0.1:8000/singlemail/
```

Server response

Code	Details
200	<div><div>Response body</div><div><pre>{ "response": { "category": "Loan Request", "primary_request": { "request_type": "Commitment Change", "sub_request_type": "Increase", "confidence_score": 0.9, "loan_amount": 500000, "deal_name": null, "expiration_date": null, "justification": "The email explicitly states an approval for a credit limit increase to \$500K, indicating a change in the existing commitment." }, "additional_requests": [], "duplicate_email": false } }</pre></div><div><div>Download</div></div></div>

Results

An email with an attachment

mails * required
array<string>

Upload one or more Mails as .eml or .msg

Choose File

Financing Request – ABC Logistics.eml

-

Add string item

attachments * required
array<string>

Upload one or more Attachments of format .docx or .pdf

Choose File

Company Information.docx

-

Add string item

Execute

Clear

Responses

Curl

```
curl -X 'POST' \
  'http://127.0.0.1:8000/mailwithattachments/' \
  -H 'accept: application/json' \
  -H 'Content-Type: multipart/form-data' \
  -F 'mails=@Financing Request – ABC Logistics.eml;type=message/rfc822' \
  -F 'attachments=@Company Information.docx;type=application/vnd.openxmlformats-officedocument.wordprocessingml.document'
```

Request URL

```
http://127.0.0.1:8000/mailwithattachments/
```

Server response

Code	Details
200	<div><div>Response body</div><div><pre>{ "response": { "category": "Loan Request", "primary_request": { "request_type": "Equipment Financing", "sub_request_type": null, "confidence_score": 1, "loan_amount": "750000", "deal_name": null, "expiration_date": null, "justification": "The email body mentions financing options and the attachment explicitly details an equipment financing request." }, "additional_requests": [], "duplicate_email": false } }</pre></div><div><div></div><div>Download</div></div></div>



Thank You

Team members

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- Saikishore Kothakota
- Sri Hari Krishnan