**Falcon Email Assistant Add-On**

The Falcon Email Assistant is a versatile Gmail add-on designed to enhance email management

through advanced natural language processing powered by the **Falcon-7B-Instruct model** from

Hugging Face. This add-on provides users with the ability to summarise emails, categorise them based

on the sender, and generate customised replies, all within a user-friendly interface.

Fig: Falcon Email Assistant

**Email Summarization**

The Falcon Email Assistant's capacity to efficiently summarise emails is one of its primary strengths.

Users may rapidly understand the main points of emails without having to read lengthy texts by

extracting important elements like the sender, subject, date, and a brief synopsis. Upon choosing an

email and selecting "**Get Email Summary**," the add-on obtains the contents of the email, transforms it

to plain text, and forwards this material to the **Falcon-7B-Instruct model**. The summary that the

model then produces is presented in a card format together with other extracted details. This feature,

which lets users prioritise their answers based on summary content, is very helpful for customers who

deal with large email quantities.

Fig: Mail Body

Fig: Summary of Mail

8**Email Classification and Labelling**

By classifying and categorising emails, the Falcon Email Assistant also performs very well at

email organisation. Users are assisted in keeping their inboxes organised as it automatically

sorts emails according to the sender's domain. Users can designate a category for email

filtering and apply labels correspondingly by choosing the "**Customise Email**" option. For

instance, emails from domains such as facebook.com or google.com may automatically be

classified as belonging to Facebook or Google, respectively. By automatically organising

emails, users may save time and effort while looking for critical communication by easily

retrieving certain emails and clearing their inbox.

Fig: Classify Email Card and Label Mails

**Reply with Custom Subject**

The add-ons capability to enable answers with personalised subjects is another excellent feature. Upon

selecting "**Reply with New Subject**," users are prompted to compose a reply and given a box to create

a new subject line. Afterwards, the **Falcon-7B-Instruct model** makes use of this prompt to provide a

recommended response that users may check and modify before sending. Users that need to customise

their email answers for various audiences or settings will find this feature very helpful, since it

improves communication in general.

9Fig: Add Subject & Prompt for generating mail and Generated Mail

Fig: Edit Mail and Save Mail Options

Fig: Send Mail

10**User Interface and Interaction**

With Google Apps Script's Card Service, the Falcon Email Assistant's user interface has a simple,

card-based style that facilitates straightforward interactions. With its own buttons and sections, the

primary action page offers choices for email classification, replying with a new subject, and email

summarising. The simple layout of the add-on features makes it easy for users to browse through them,

increasing the effectiveness and decreasing the time required for email administration.

**Integration with Hugging Face API**

The Falcon Email Assistant's ability to parse email content using the Falcon-7B-Instruct model is made

possible by its integration with the Hugging Face API. To produce email answers and summaries, the

add-on sends HTTP POST requests using an API token for secure authentication. This flawless

integration guarantees that the add-on runs smoothly and gives users accurate results that are pertinent

to their context.

**Permissions and Security**

In order for the Falcon Email Assistant to work correctly, it needs certain OAuth scopes, such as

read-only access to Gmail, the ability to edit labels, the ability to send emails, the ability to carry out

Gmail add-on activities, the ability to access message content and metadata, and the ability to make

external HTTP calls. The add-on needs certain permissions in order to process and read email content

safely and protect user privacy. User data security is given top priority in the design, guaranteeing that

private data is shielded during use of the add-on.

**Learnings From the Project**

Building the Falcon Email Assistant taught me a lot about how powerful natural language processing

can be for managing emails. I realised that integrating models like Falcon-7B-Instruct can save users a

ton of time by summarising emails, sorting them, and even suggesting replies. I also learned the

importance of a simple, user-friendly design. The card-based interface we used made it much easier for

people to navigate the features. Another key takeaway was the need for secure API integration,

ensuring that users get accurate results without compromising their privacy. Overall, this project

showed me how combining advanced AI with thoughtful design can create really useful tools for

everyday tasks.