

The background is a deep blue gradient with a subtle pattern of white dots. Overlaid on the left side are several concentric circles and a large circular scale with degree markings from 140 to 260. Some circles have arrows indicating a clockwise direction.

HOME ASSIGNMENT

CUSTOMER SUPPORT SYSTEM ANALYSIS

FOR EMAIL CLASSIFICATION AND CATEGORIZATION

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THE DATASET

CUSTOMER IT SUPPORT - TICKET DATASET

LABELLED EMAIL TICKETS WITH AGENTS ANSWER, PRIORITIES, QUEUES

Customer IT Support - Ticket Dataset

35

Code

Download

Data Card





Code (10)

Discussion (2)

Suggestions (0)

It includes **priorities**, **queues**, **types**, **tags**, and **business types**. This preview offers a detailed structure with classifications by department, type, priority, language, subject, full email text, and agent answers.

Features / Attributes

Field	Description	Values
 Queue	Specifies the department to which the email ticket is routed	e.g. Technical Support, Customer Service, Billing and Payments, ...
 Priority	Indicates the urgency and importance of the issue	<div><div>Low</div><div>Medium</div><div>Critical</div></div>
 Language	Indicates the language in which the email is written	EN, DE, ES, FR, PT
Subject	Subject of the customer's email	
Body	Body of the customer's email	
Answer	The response provided by the helpdesk agent	
Type	The type of ticket as picked by the agent	e.g. Incident, Request, Problem, Change ...
 Business Type	The business type of the support helpdesk	e.g. Tech Online Store, IT Services, Software Development Company
Tags	Tags/categories assigned to the ticket, split into ten columns in the dataset	e.g. "Software Bug", "Warranty Claim"

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Queue

Specifies the department to which the email ticket is categorized. This helps in routing the ticket to the appropriate support team for resolution.

-  **Technical Support:** Technical issues and support requests.
-  **Customer Service:** Customer inquiries and service requests.
-  **Billing and Payments:** Billing issues and payment processing.
-  **Product Support:** Support for product-related issues.
-  **IT Support:** Internal IT support and infrastructure issues.
-  **Returns and Exchanges:** Product returns and exchanges.
-  **Sales and Pre-Sales:** Sales inquiries and pre-sales questions.
-  **Human Resources:** Employee inquiries and HR-related issues.
-  **Service Outages and Maintenance:** Service interruptions and maintenance.
-  **General Inquiry:** General inquiries and information requests.

Priority

Indicates the urgency and importance of the issue. Helps in managing the workflow by prioritizing tickets that need immediate attention.

-  **1 (Low):** Non-urgent issues that do not require immediate attention. Examples: general inquiries, minor inconveniences, routine updates, and feature requests.
-  **2 (Medium):** Moderately urgent issues that need timely resolution but are not critical. Examples: performance issues, intermittent errors, and detailed user questions.
-  **3 (Critical):** Urgent issues that require immediate attention and quick resolution. Examples: system outages, security breaches, data loss, and major malfunctions.

Language

Indicates the language in which the email is written. Useful for language-specific NLP models and multilingual support analysis.

- en (English)
- de (German)

PROJECT DETAILS

- Context: It's common in companies to have customer support systems that have to deal with emails from customers which include tasks such as topic comprehension and criticality understanding in order to refer to an ideal department and prioritize according to level of urgency.
- Problem: How to optimize and improve customer support systems in order to classify automatically emails by the respective topic and priority labels?
- Solution: Create a specialist AI model based on Generative AI to perform a text classification and assign the correct label for each email regarding to both topic and priority.

THE SOLUTION

POETRY + OOP + PYTHON + BERT + BASELINES MODELS + GPU + WANDB + FASTAPI + GRADIO + STREAMLIT + GIT + DOCKER

Customer IT Support Email Classifier

Subject

Body

Model Choice
☐ nb ☐ lr ☐ distilbert ☐ bert

output

Flag

Use via API · Built with Gradio · Settings

Customer IT Support Prediction API 0.1.0 QAS 3.1

[/openapi.json](#)

default

/ Send Welcome

/predict Predict

