TRAIGE

Al-enabled Triaging System USER GUIDE

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Practice Module – Intelligent Reasoning Systems –

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1. GETTING STARTED

1.1 Requirements

The system can run in any OS with both Java Runtime and Python environments. In order to run the system, you will need to have:

- a working Python installation with the necessary libraries installed:
 - o flask
 - pandas
 - o pickle
 - scipy
 - o joblib
- a working Java installation (version greater than Java 8)
- a working MySQL installation with following settings
 - o database: triage app
 - o user: sprout
 - o password:1qazxsw2

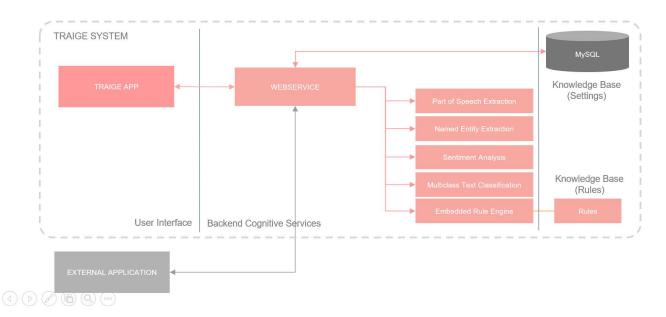
1.2 Starting Up

The starting up process is relatively simple by doing the following steps:

- a) Unzip the deploy.zip provided
- b) Run startWebService.bat
- c) Edit startApplication.bat. Edit call /activate based on your settings.

- d) Run startApplication.bat and the TRAIGE App will be displayed in the browser.
- e) Create an account, configure the settings and start using.

2. BUSINESS PROCESS



The TRIAGE system helps the IT helpdesk personnel to prioritize the tickets based on 3 rule sets. This is a 2-step business process as follows:

2.1 Configuration

You will need to decide what works for your organization. Configure the 3 sets of business rules on the Settings page.

Keyword Matching

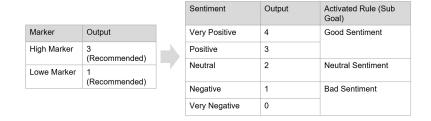
a) Enter terms or keywords for each of the priority settings, each term separated by comma.



Sentiment Analysis



a) Configure the markers based on your preference. See below for recommended settings.



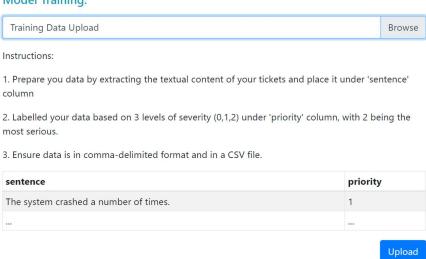
Supervised Machine Learning

- a) Prepare data by extracting the textual tickets contents and place it under 'sentence' column.
- b) For each sentence, label the data based on 3 levels of severity (0,1,2) under 'priority' column, with 2 being the most severe.
- c) Ensure data is in comma-delimited format and in a CSV file. See sample below:

```
sentence, priority
"With or without the sex , a wonderful tale of love and destiny , told well by a master storyteller",0
"Cattaneo should have followed the runaway success of his first film , The Full Monty , with something different .",0
"It's best to avoid imprisonment with the dull , nerdy folks that inhabit Cherish .",0
An ambitious and moving but bleak film .,0
A model of what films like this should be like .,0
And I expect much more from a talent as outstanding as director Bruce McCulloch .,0
"Although Jackson is doubtless reserving the darkest hours for The Return of the King , we long for a greater sense of urgency in the here and now of The Two Towers .",0
"It offers little beyond the momentary joys of pretty and weightless intellectual entertainment .,0
"As a movie , it never seems fresh and vital .",0
"It's so crammed with scenes and vistas and pretty moments that it's left a few crucial things out , like character development and coherence .",0
Vixidiy conveys both the pitfalls and the pleasures of over-the-top love .,0
"Occasionally funny and consistently odd , and it works reasonably well as a star vehicle for Zhao .",0
Consider the film a celluloid litus test for the intellectual and emotional pedigree of your date and a giant step backward for a director I admire .,0
"wes , 4Ever is harmless in the extreme and it'll mute your kids for nearly 80 minutes , but why not just treat the little yard apes to the real deal and take them to Spirited Away ?",0
```

d) Upload the file

Model Training:



e) Check the results (confusion matrix) if the results are satisfactory.

Business Rules - Artificial Intelligence:

Confusion Matrix:

	Low Priority	Medium Priority	High Priority
Low Priority	368	140	123
Medium Priority	107	392	133
High Priority	129	155	338

☐ Include in evaluation

f) Check the box to include rules as part of inference.

2.2 Usage

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For usage, you need to interface your existing ticket system to call TRAIGE API. Refer to next section for more information.

3. USAGE

3.1 Input

a) Note your designated API end point and requirements in settings page

API - EndPoint:

http://localhost:9000/595cd349-3566-4472-bda7-ea00384adc22/check

API - Requirement (Form Data):

Post form-data to the API endpoint with following requirement:

Form Field Name	Form Field Type	Description
id	Text	Unique identifier in your existing ticketing system
details	Text	Textual content of your tickets.
timestamp	Text	Timestamp of ticket in Unix Timestamp(eg. 1586092601)

b) Ensure your existing ticket system is able to post form-data to TRAIGE system.

3.2 Output

"severity": 2

}

```
a) The following is an example of an expected results:
{
    "id":"123",
    "details": "I am very unhappy with your service level.",
    "timestamp": "1586092601",
    "sentiments": 1,
    "bagofwords": ["service","level"],
    "ai": 1,
```

b) Configure your existing ticketing system to interpret the results as follows:

Key	Description
id	Unique identifier in your existing ticketing system
details	Textual content of your tickets.
timestamp	Timestamp of ticket in Unix Timestamp(eg. 1586092601)
sentiments	Range of values from 0 to 4. The lower it is, the more negative is the sentiments
bagofwords	These are words detected by the system
1211	If you have a trained model, you may include it in the evaluation, and this shows the predicted priority