MTH 661 Introduction to Artificial Intelligence.

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**Text Analysis with Azure Text Analytics**

**Task 1: Detecting Language**

1. I utilize cognitive services; you need to use cognitive endpoints and keys, which can be obtained via the Azure site. After setting up the text analytics client and Azure key credential, the program can be launched.

2. I followed the work instructions for adding text to the documents, and I used language detection to pinpoint two languages that I know. I also got a confidence score for the language, its name, and its code after running the application. I looked over the output that the software produced.

A screenshot of a computer

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**Task 2: Sentiment Analysis**

1.Sentiment analysis is the process of determining a written text's emotional tone. It aims to determine if the sentiment expressed in the text is neutral, positive, or negative. To do this, several techniques can be applied to analyze the text's overall sentiment as well as its specific sentiments. To verify sentiment analysis's effectiveness, I examined how well it could recognize neutral, positive, and negative sentiments in the given text.

2.The sentiment analysis's findings confirmed the earlier information. Examine if the scores point to a favorable, neutral, or unfavorable conclusion and assess if the mood is generally positive.

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**Task 3: Key Phrase Extraction**

1.After analyzing unstructured text, the Key Phrase Extraction capability produces a list of key phrases for each record. Azure AI Language's Key Phrase machine learning models are used in this talent. If you need to swiftly locate the key talking points in the record, this feature comes in handy**.**

2. key phrase extraction output is given below

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**Task 4: Entity Recognition**

1.Using Natural Language Processing (NLP), named entities extraction is an Azure AI Video Indexer AI tool that gathers information about the places, people, and brands that appear in audio and image data.

2. Entity recognition is used to detect the places, brands in day to day life for real world usage which detect the real time application the output of the entity recognition is attached below.

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**Reflection for Text Analysis with Azure Text Analysis.**

1.I don't have any firsthand knowledge with Azure Text Analytics; I'm just an AI language model. On the other hand, given its strengths and possible applications, I can offer some insights.

2.Sentiment analysis is one feature of Azure Text Analytics that really shines. Businesses can use this capability to interpret the feelings and viewpoints conveyed in text data, which is useful for assessing customer satisfaction, seeing possible problems, or keeping an eye on a brand's reputation.

3.Key phrase extraction is another intriguing function that aids in locating the primary subjects or themes in a book. Large volumes of text data can be effectively organized and categorized with this, giving businesses instant access to pertinent information and new perspectives on consumer preferences and industry trends.

4. Another potent feature of Azure Text Analytics is language detection. Its ability to automatically determine a text's language is useful for programs that handle multilingual content or require processing text data from many sources.

5.Although Azure Text Analytics has a lot of helpful capabilities, there could be some difficulties when utilizing the program. For example, sentiment analysis's accuracy can change based on the text's intricacy or the context in which it's used. For more accurate results, the sentiment analysis model may need to be adjusted to certain domains or sectors.

6.Application-wise, Azure Text Analytics is compatible with a wide range of programs and platforms. In addition to many other text analysis activities, it can be used for market research, social media monitoring, customer feedback analysis, content organizing, and more. Businesses may make wise judgments by using Azure Text Analytics' capabilities to extract insightful information from their textual data.

7.All things considered, Azure Text Analytics offers a strong suite of text analysis tools, and when integrated into apps, it can strengthen decision-making procedures, better user experiences, and spur company expansion.

**References:**

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