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ITAI 2372 Application Intelligence Application

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## Lab 03 on Skillable:

The image shows two screenshots related to the 'Lab 03 on Skillable'.

The top screenshot shows a lab card in a Skillable interface. The card is titled 'Analyze text with Language Studio (Expected Duration 1 hours)' and includes details such as 'AI: 900700-A Microsoft Azure AI Fundamentals (Cloud Slice Provided), Learning Path 03 (CSS)', 'Required: Yes', 'Status: Complete', 'Started: Saturday, February 8, 2025 7:39 PM (Central Standard Time)', and 'Ended: Saturday, February 8, 2025 8:26 PM (Central Standard Time)'. A 'Launch' button is visible, and a note indicates '9 of 10 launch attempts remaining'.

The bottom screenshot shows the 'Analyze text with Language Studio' application running in a Google Chrome browser. The application interface includes a sidebar with 'Recycle Bin' and 'Visual Studio Code' icons. The main content area displays instructions for the lab, including a sample text snippet: 'The hotel rooms were better insulated but they are not. Had to put cotton balls in my ears to be able to sleep. Was too tired to enjoy the city the next day. Rooms are TINY. I picked the room because it had two queen size beds--but the room barely had space to fit them. With family of four in the room it was tight. With all that said, rooms are clean and they've made an effort to update them. The hotel is in Marina district with lots of good places to eat, within walking distance to Presidio. May be good hotel for young stay-up-late adults on a budget'. Below the text, there are instructions for step 4: 'Select Run and review the sentiment together with the confidence level. Have a look at the text and compare the text to the sentiment analysis that the service returned.' The application also includes a 'Clean up' section with instructions for deleting resources and a 'Learn more' section with a link to the 'Language service page'. The bottom status bar indicates '100% Tasks Complete' and 'End >'.

**The "Module 03 Lab: Analyze Text with Language Studio" provided an insightful exploration of Natural Language Processing (NLP) capabilities within Azure AI-Language. Through hands-on experience, I gained a deeper understanding of how AI can process and interpret**

human language, providing valuable sentiment analysis and opinion mining.

One of the most significant takeaways from this lab was understanding how Azure AI-Language Service can analyze text sentiment and extract meaningful insights from written reviews. By using Language Studio, I learned how AI assigns sentiment scores to text, categorizing them as positive, neutral, or negative. The confidence scores associated with each sentiment helped me grasp the accuracy and reliability of AI-driven text analysis.

Additionally, I explored how Azure allows users to configure and deploy AI resources seamlessly. Setting up a Language resource and integrating it with Language Studio provided me with a practical understanding of how to leverage Azure AI for various NLP tasks, such as sentiment analysis and key phrase extraction.

I encountered a few challenges. Initially, navigating the Azure portal and setting up the Language resource was slightly overwhelming due to the multiple configuration options available. Ensuring that the correct subscription, resource group, and region were selected required careful attention.

Another challenge was interpreting the sentiment scores correctly. Although the AI model assigned scores to different parts of the text, understanding how these scores correlated with the actual meaning of the reviews required deeper analysis. For instance, some reviews contained both positive and negative sentiments, making it necessary to examine sentence-level analysis rather than just relying on the overall document sentiment.

This lab experience reinforced the potential of AI-powered NLP in real-world applications. Businesses can utilize Azure AI-Language for customer feedback analysis, enabling them to make data-driven decisions based on sentiment trends. I also realized that AI is not

**infallible; while the sentiment analysis was generally accurate, some nuances in human language might require additional context for precise interpretation.**

**Furthermore, I gained an appreciation for the importance of resource management within Azure. Deleting unused resources after completing the lab highlighted best practices for cost optimization and maintaining a clean workspace in the Azure portal.**

**Overall, this lab provided a valuable hands-on experience with Azure AI-Language Studio. I now feel more confident in using AI-driven NLP tools for text analysis and sentiment mining. Despite some initial challenges, the experience enhanced my understanding of AI's role in language processing and its practical applications in various industries.**