Q1: Which of the following describes the Model Catalog?

A: B. A collection of pre-trained models for AI tasks

Q2: Which provider is known for enterprise-ready AI solutions within Azure AI Studio?

A: C. Microsoft

Models Suitable for Sentiment Analysis:

. financial-report-analysis

. fininteautomata-bertweet-base-sentiment-analysis

. Microsoft-deberta-base-mnli

Models Suitable for Language Translation:

. t5-base

. Azure-AI-Translator

. vietai-envit5-translation

Models Suitable for Image Translation:

. Stable-Image-Core

. Muse

. dall-e-2

Case Study Activity:

Task: personal virtual assistant

Model chosen: Microsoft/DialoGPT-small

Because I want a personal virtual assistant, I do not need to rent servers or additional hardware to run my personal virtual assistant. Instead, I can just have the assistant run on my local machine. Microsoft/DialoGPT-small sacrifices response complexity for efficiency and lower hardware requirements. This means that my laptop has a better chance of running the assistant without running into hardware limitations. While I own a desktop with stronger hardware, I use my laptop much more often, and as such I would rather have the assistant run on my laptop than my desktop. I do not want to wait long for responses, so DialoGPT-small is better suited for my wants because it can generate responses more quickly than DialoGPT’s larger version. I could use Godel, which is a better version of DialoGPT, but Godel requires hardware that is more powerful than my laptop to run effectively. While my desktop has hardware good enough to run Godel effectively, I believe I will ultimately use a desktop-based assistant significantly less than a laptop-based assistant. Because DialOGPT has been succeeded by Godel, I do not need to worry about updates and changes to DialoGPT, which is helpful because this is my first time coding a virtual assistant.

Effective Model Management:

Q1: Pre-trained models in Azure AI Studio cannot be fine-tuned. False

Q2: Azure AI Studio provides tools for version control and collaboration. True

Effective model management, regardless of the number of models actually used, is paramount for AI projects. If multiple, different AI models are used in a single project, keeping track of the models, the resources they are using, and what exactly they are doing, it is critical to ensure that the final product works at all. Version control is also an important aspect of effectively managing AI models. Ensuring the AI models used are up to date is the primary task of version control, but keeping track of the exact version of the AI model currently used is also important. This is because updated versions of AI models can introduce new problems to the project that can not currently be resolved. At that point, the only real solution is to roll back the AI model to the latest working version. Updated versions of the AI model could also deprecate code and functions from older versions in favor of newer code and functions. The only solutions then would be rewriting all of the deprecated code to use the new code, writing adapter code that allows the deprecated code to interact with the new code, or rolling back to a version that still uses the deprecated code.