## Lab 3-01: Generative AI with Amazon Bedrock

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| **Introduction**  Amazon Bedrock is a fully managed AWS service that allows users to build and explore generative AI applications using pre-trained Foundation Models (FMs) from providers such as Anthropic, AI21 Labs, Meta, Mistral AI, and Stability AI. It helps you create text, images, and chat-based outputs without writing complex code or managing infrastructure. With Bedrock, you can simply choose a model, enter a prompt, and instantly see the generated result, making it ideal for beginners who want to experience AI in action.  **Challenge**  Imagine you are part of a company that wants to add a smart AI chatbot or content generator to its website. You need to test if an AI model can correctly answer user questions, summarize text, or generate short messages. Instead of building and training a model from scratch, you will use Amazon Bedrock to easily test a ready-made foundation model using a few clicks, no coding or configuration required.  **Lab Diagram**    **Solution**  **Step 1: Sign in to AWS**   1. Open your web browser and go to <https://aws.amazon.com>. 2. Log in using your AWS account credentials (email and password). 3. Once logged in, you will see the AWS Management Console home page.     **Step 2: Open Amazon Bedrock**   1. In the top search bar, type Bedrock.      1. Click on Amazon Bedrock from the search results.      1. This will open the Amazon Bedrock console.     **Step 3: Select the AWS Region**   1. Amazon Bedrock is available in specific regions. From the top-right corner, click the Region selector (a dropdown menu). Choose one of the supported regions, for example: us-west-2 (Oregon).     **Step 4: Open the Playground**   1. From the left-hand side menu, select Chat / Text Playground.      1. You will see an editor where you can type prompts and choose a model.     **Step 5: Choose a Model**   1. Under Mode, choose Single prompt.      1. Under Model Selection, click on the dropdown and choose a model such as Anthropic Claude 3 Haiku. This is fast, efficient, and perfect for beginners.      1. Click Apply to confirm your selection.     **Step 6: Enter a Prompt**   1. In the large text box labeled “Enter your prompt here,” type a simple question like:   **What is the capital city of Australia?**     1. Click Run to send the prompt to the model.     **Step 7: View the Output**   1. Wait a few seconds for the model to process your request, and you will see the AI’s response appear below, such as:   **“The capital city of Australia is Canberra.”**    **Step 8: Try More Prompts**  Try a few more examples to explore what the AI can do:   * “Write a two-line poem about the sun.”      * “Summarize why exercise is important.”      * “Explain cloud computing in simple words.”     **Step 9: Compare Models**   1. Change the Mode to Chat.      1. Enable Compare Mode.      1. Select two models (for example, Claude 3 Haiku and Claude 3 Sonnet).      1. Type the same question and click Run to see how each model’s response differs.    * One might give a shorter answer    * Another might give a more detailed explanation     **Step 10: Explore Further**   1. Try the Image Playground to generate images from text (for example, “A mountain landscape at sunset”). |