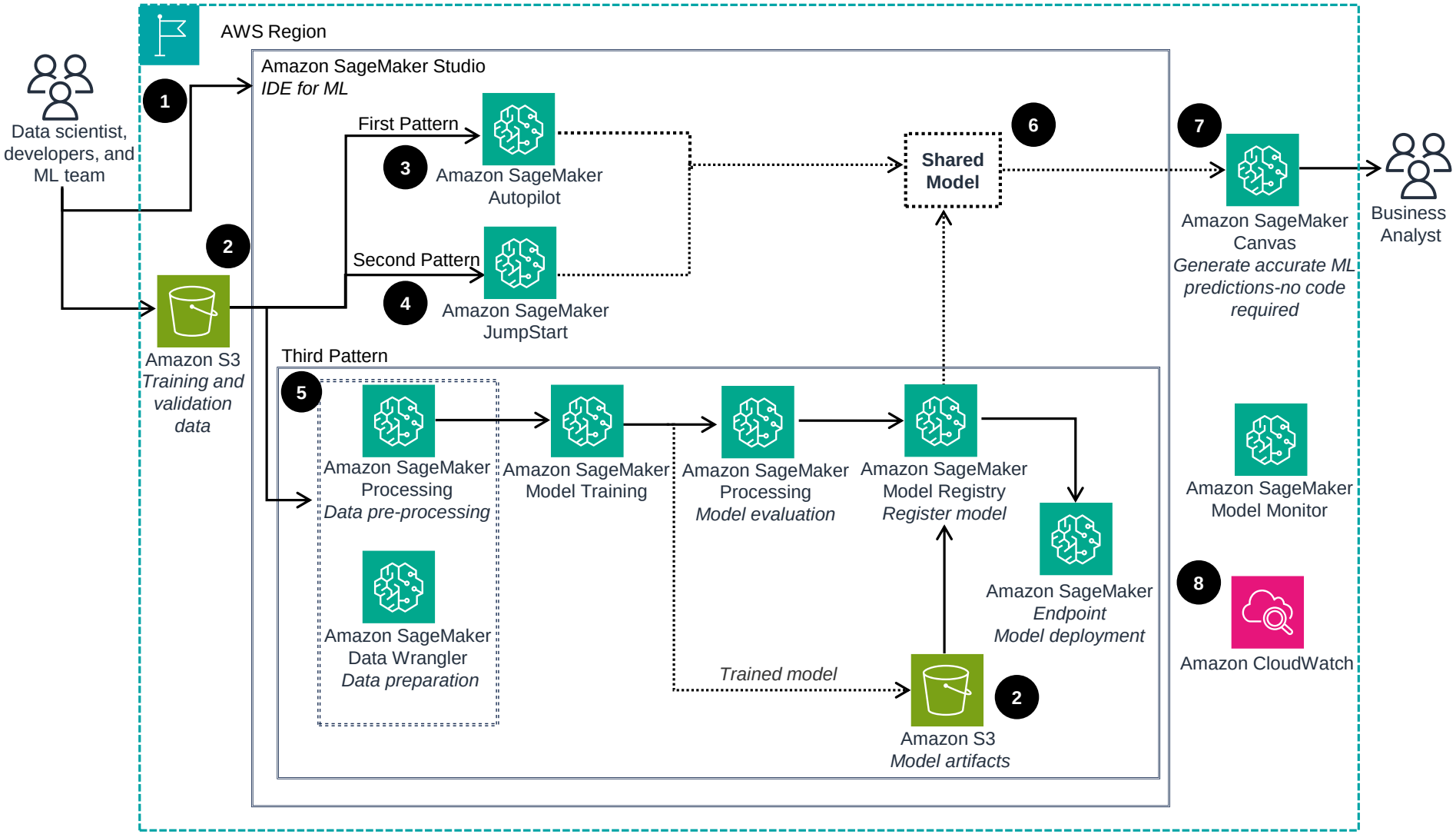
Guidance for Bringing Your Own Machine Learning Models into Amazon SageMaker Canvas

This architecture diagram shows how business analysts can use Amazon SageMaker Canvas to load machine learning models, which can be trained anywhere, and generate predictions in the UI. All without writing a single line of code. Steps 1-5 are outlined here. For more on Steps 6-9, go to the next slide.



1. Data Scientist or Machine Learning (ML) teams use **Amazon SageMaker Studio**, an integrated development environment (IDE), for ML to perform and manage all ML steps.
2. Training data, validation data, and model artifacts are stored in **Amazon Simple Storage Service** (Amazon S3).
3. In the first pattern, use **Amazon SageMaker Autopilot**,* an ML service that automatically builds, trains, and tunes ML models. Select the best model in the model leaderboard based on performance and accuracy. Deploy the best model to production with just 1-click, or iterate with the recommended models.
4. In the second pattern, use **Amazon SageMaker JumpStart**, an ML hub that provides pre-trained, open-source models. It serves a wide range of uses, such as fraud detection, credit risk prediction, and product defect detection. You can deploy more than 300 pre-trained models and large language models (LLMs) for tabular, vision, text, and audio data.
5. In the third pattern, use **Amazon SageMaker Processing** or **Amazon SageMaker Data Wrangler** for data preparation. Use **Amazon SageMaker Model Training** for training your ML model. Use **SageMaker Processing** for any postprocessing or model evaluation. Use **Amazon SageMaker Model Registry** for registering your model, and use endpoints for hosting the model.

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AWS Reference Architecture

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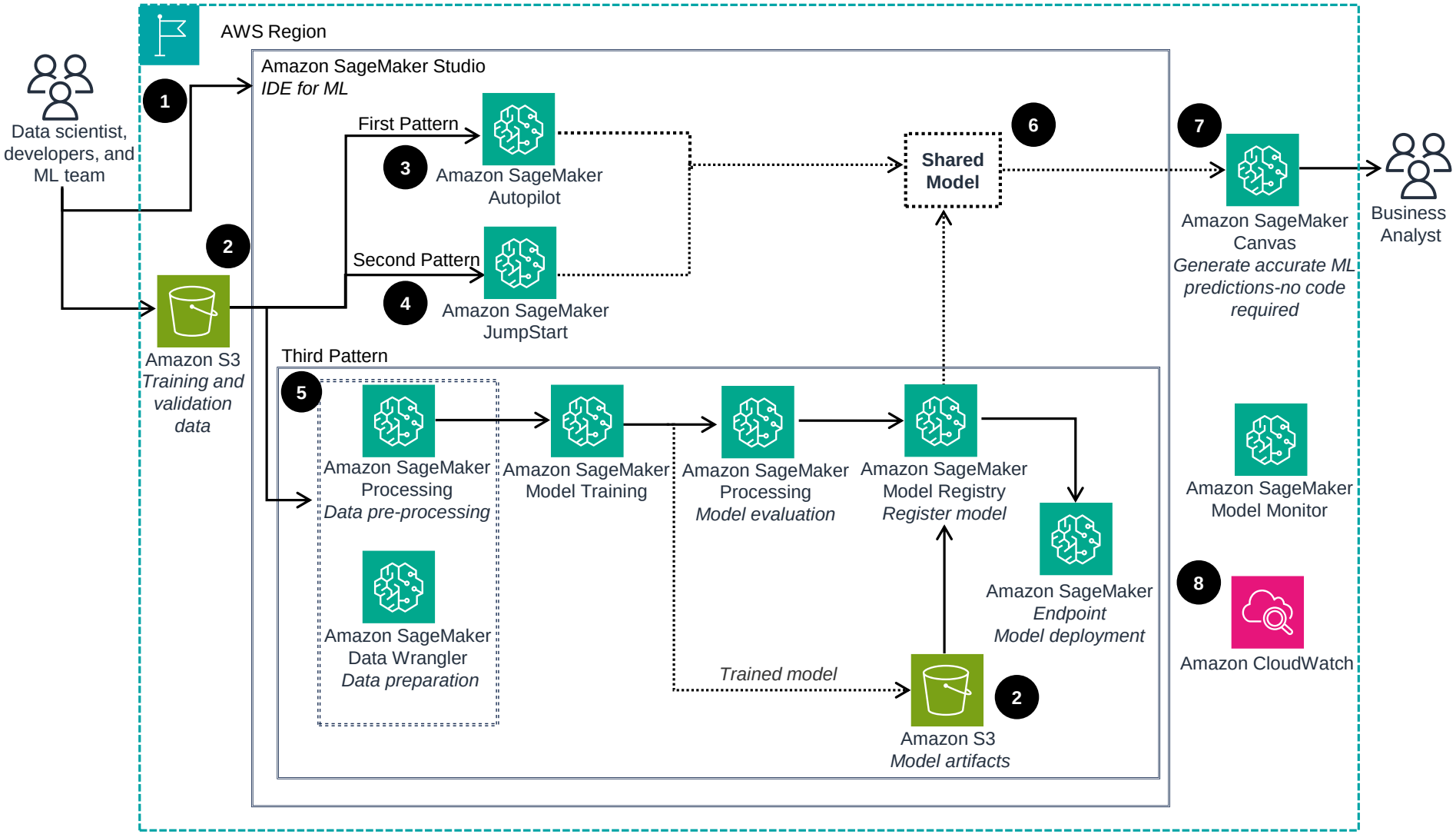
Steps 6-9 are outlined here.



6 Share or bring your own model to **SageMaker Canvas** using either of the first, second, or third patterns with 1-click using **SageMaker Studio**.

7 Business analysts log in to **SageMaker Canvas**, import the model with 1-click, and generate predictions without writing a single line of code or requiring ML expertise. You can use models to make predictions interactively, and for batch scoring on bulk datasets

8 Monitor training jobs and model endpoints either in **SageMaker Studio**, by using **Amazon CloudWatch** metrics, or with **Amazon SageMaker Model Monitor**.

* As of November 2023, the features of Amazon SageMaker Autopilot are migrating to SageMaker Canvas.

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