Anatomy of a Machine Learning Project

These worksheets are meant to encourage you to actively engage with the core concepts taught in this program. While the majority of the program will be focused on code, implementation, and practical skills, these worksheets give you the opportunity to reflect, brainstorm, and fill in any conceptual gaps.

Reflection #1: Machine Learning Tasks

In the previous worksheet for *Wisdom from the Trenches*, you listed 3 real-world applications of machine learning that you personally found interesting. Now, based on what you learned in this module, write down what you think is the appropriate **machine learning task** for each one. Is it regression? How about classification? Or maybe something in unsupervised learning, such as clustering?

Reflection #2: Three Questions Before You Start

Pick your favorite real-world machine learning application that you brainstormed in the previous worksheet. Assume you are working on that application. Based on what you currently know, answer the following 3 questions to the best of your abilities.

What is the *problem* you are trying to solve?

Who are the *key stakeholders?*

What does machine learning offer over the *existing solution?*

Reflection #3: Defining the Win Condition

For the example you chose for Reflection #2, based on your answers above, write down what you think would be a reasonable win condition or deliverable. Remember, try to make it *specific* and *quantifiable*. For example, "consistently predict house prices within **$Y** of actual prices" is better than "predict housing prices."

Reflection #4: Data Collection

Now that you've learned about the idea of a **target variable** and **input features**, write down what you think would be the target variable you'd need (if applicable). Then, brainstorm 3 ideas for relevant input features that you think would help your model.