**Weekly Progress Report**

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**Domain:** Data Science and Machine Learning  
**Date of Submission:** 17 - 02 - 2025

**Week Ending:** 02

**I. Overview:**

This week, I focused on expanding my knowledge of data science by reading **"Introducing Data Science: Big Data, Machine Learning, and More, Using Python Tools"** by **Davy Cielen, Arno D. B. Meysman, and Mohamed Ali**. Additionally, I completed a quiz based on the material covered. The primary objective was to strengthen my theoretical understanding and reinforce key concepts in data science and machine learning.

**II. Achievements:**

1. **Book Study:**
   * Read selected chapters from **"Introducing Data Science."**
   * Covered key topics, including:
     + The role of data science in the big data landscape.
     + The structured process of data science.
     + Fundamental concepts of machine learning.
2. **Quiz Completion:**
   * Took a quiz based on the book’s content.
   * Evaluated my understanding of essential topics such as data science workflows, big data characteristics, and machine learning techniques.

**III. Challenges:**

1. **Understanding Complex Concepts:**
   * Some sections discussing **advanced data science techniques** required additional effort and time to fully grasp.
2. **Time Management:**
   * Balancing reading, quiz preparation, and other responsibilities proved to be challenging.

**IV. Learning Resources:**

* **"Introducing Data Science: Big Data, Machine Learning, and More, Using Python Tools"** (Davy Cielen, Arno D. B. Meysman, and Mohamed Ali).
* Notes and study materials derived from the book for better comprehension.
* Online resources and practical examples to support and clarify complex concepts.

**V. Next Week's Goals:**

1. **Project Preparation:**
   * Begin initial project implementation by **reviewing datasets** and **defining objectives** for:
     + **Crop and Weed Detection**
     + **Predicting the Lifetime of a Bearing in Manufacturing**
2. **Skill Enhancement:**
   * Explore the **practical use of Python libraries** such as **NumPy, Pandas, and Matplotlib**.
   * Study **basic machine learning algorithms** to gain hands-on experience.

**VI. Additional Comments:**

This internship continues to be an enriching experience, allowing me to **deepen my understanding** of data science and apply theoretical concepts to real-world projects. I am excited to build on this progress in the coming weeks.