

# Weekly Progress Report

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**Domain:** Data Science and Machine Learning

**Date of Submission:** 11 – 01 – 2025

**Week Ending:** 02

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## I. Overview:

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

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## II. Achievements:

### 1. Book Study:

- Read selected chapters from "Introducing Data Science."
- Topics covered include:
  - Data science in a big data world.
  - The data science process.
  - Fundamentals of machine learning.

### 2. Quiz Completion:

- Completed a quiz based on the book's content.
- Assessed understanding of key topics such as data science processes, big data characteristics, and machine learning techniques.

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## III. Challenges:

### 1. Comprehending Complex Concepts:

- Some sections of the book, particularly those related to advanced data science techniques, required additional time and effort to fully understand.

### 2. Time Management:

- Balancing the reading material and quiz preparation with other responsibilities was challenging.
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#### **IV. Learning Resources:**

- "Introducing Data Science: Big Data, Machine Learning, and More, Using Python Tools" by Davy Cielen, Arno D. B. Meysman, and Mohamed Ali.
  - Notes and resources from the book to clarify complex topics.
  - Online explanations and examples to supplement book content.
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#### **V. Next Week's Goals:**

1. **Project Preparation:**
    - Begin initial steps for project implementation by reviewing datasets and defining objectives for "Crop and Weed Detection" and "Predict Lifetime of a Bearing in Manufacturing."
  2. **Skill Enhancement:**
    - Explore practical applications of Python libraries such as NumPy, Pandas, and Matplotlib.
    - Study basic machine learning algorithms for hands-on implementation.
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#### **VI. Additional Comments:**

This internship continues to provide valuable learning opportunities, allowing me to enhance my knowledge and apply theoretical concepts to practical scenarios. I look forward to progressing further in the upcoming weeks.