

Weekly Progress Report

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Domain: Data Science and Machine Learning

Date of submission: 30/12/2025

Week Ending: 02

I. Overview:

This week, the primary focus was on studying "Introducing Data Science: Big Data, Machine Learning, and More, Using Python Tools" book and completing 20 questions ka quiz. Efforts were made to understand data preparation concepts from the book PDF.

II. Achievements:

1. Book Study - Data Preparation:

- Explored Chapter 2 on data science process, focusing on Step 3: Cleansing, integrating, and transforming data.
- Successfully understood data cleaning techniques like handling missing values, outliers, and redundant whitespaces.

2. Quiz Completion:

Name of the project: Machine Learning Data Science Quiz

- Contributed by completing 20 questions quiz based on book concepts.
- Covered topics like sanity checks, capital letter mismatches, and data transformation.

3. Learning Python Data Science:

- Acquired proficiency in Python techniques like `.strip()`, `.lower()` for data cleaning.
- Applied book concepts to understand ETL processes for real-world data projects.

III. Challenges:

1. Advanced Data Concepts:

- Encountered challenges during understanding PCA for variable reduction and dummy variables creation.
- Ongoing efforts to troubleshoot distribution plots for outlier detection.

2. Quiz Complexity:

- Faced complexity in understanding code book deviations and different units of measurement.
- Seeking guidance to overcome challenges in data integration concepts.

IV. Learning Resources:

1. Book Documentation:

- Utilized "Introducing Data Science" PDF for reference and quiz preparation.
- Studied chapters on data cleansing, exploratory analysis, and model preparation.

2. Python Learning Resources:

- Engaged with Python string functions documentation mentioned in book.
- Participated in self-study of data science process steps from Chapter 2.

V. Next Week's Goals:

1. Data Exploration Enhancement:

- Address data exploration challenges and study histograms, boxplots from book.
- Collaborate with course material to understand Step 4: Exploratory data analysis.

2. Python Project Development:

- Tackle data modeling concepts from Step 5 to increase understanding.
- Seek feedback from book examples for continuous improvement.

VI. Additional Comments:

Week 2 quiz successfully completed after thorough book study. Data cleaning concepts from "Introducing Data Science" will strengthen portfolio projects and placement preparation.