

Format for the Weekly Progress Report

Name of the Student 1	Dev Pandya
Roll Number of Student 1	22BCP409
Name of the Student 2 (if any)	Kavya Patel
Roll Number of Student 2 (if any)	22BCP406
Project Title	Smart Energy Consumption Monitoring and Prediction Using Big Data
Name of the Supervisor (Mentor) at PDEU	Dr. Samir Patel
Week Number	Week 8

Progress made in Week 8:

- Conducted a **comprehensive study of Apache Zeppelin**, focusing on its role as a web-based notebook for **data visualization, streaming analysis, and Spark integration**.
- Explored different **Zeppelin interpreters** such as Spark, JDBC, and Shell to understand how data from Kafka and databases can be processed and displayed.
- Installed and configured **Zeppelin locally**, ensuring compatibility with the existing **Kafka–Spark ecosystem**.
- Tested basic **Zeppelin notebooks** using Spark SQL and Python interpreters to visualize static data and understand plotting capabilities.
- Analyzed how **real-time Kafka records** can be consumed through **Spark Structured Streaming** and displayed within Zeppelin notebooks.

Dev Pandya

Kavya Patel

Dr. Samir Patel

**Name & Signature of
Student 1**

**Name & Signature of
Student 2**

**Name & Signature of
Supervisor (Mentor)**