

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 9

Progress made in Week 9:

- Connected **Zeppelin** with **Spark Structured Streaming**, allowing live data consumption from **Kafka topics** directly within Zeppelin notebooks.
- Configured Zeppelin interpreters (Spark, SQL, Python) to communicate with the **relational database** for combined access to historical and streaming data.
- Created initial **notebooks** to visualize incoming data streams (state code, timestamp, load values, temperature) in real time.
- Implemented **data validation and formatting scripts** in Zeppelin to clean and structure data before visualization.
- Tested **end-to-end data flow**: Producer → Kafka → Spark → Zeppelin, ensuring live updates are reflected on charts and tables.

Dev Pandya

Kavya Patel

Dr. Samir Patel

**Name & Signature of
Student 1**

**Name & Signature of
Student 2**

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