

**Format for the Weekly Progress Report**

<b>Name of the Student 1</b>	Dev Pandya
<b>Roll Number of Student 1</b>	22BCP409
<b>Name of the Student 2 (if any)</b>	Kavya Patel
<b>Roll Number of Student 2 (if any)</b>	22BCP406
<b>Project Title</b>	<b>Smart Energy Consumption Monitoring and Prediction Using Big Data</b>
<b>Name of the Supervisor (Mentor) at PDEU</b>	Dr. Samir Patel
<b>Week Number</b>	Week 8
<p><b>Progress made in Week 8:</b></p> <ul style="list-style-type: none"> <li>• Conducted a <b>comprehensive study of Apache Zeppelin</b>, focusing on its role as a web-based notebook for <b>data visualization, streaming analysis, and Spark integration</b>.</li> <li>• Explored different <b>Zeppelin interpreters</b> such as Spark, JDBC, and Shell to understand how data from Kafka and databases can be processed and displayed.</li> <li>• Installed and configured <b>Zeppelin locally</b>, ensuring compatibility with the existing <b>Kafka-Spark ecosystem</b>.</li> <li>• Tested basic <b>Zeppelin notebooks</b> using Spark SQL and Python interpreters to visualize static data and understand plotting capabilities.</li> <li>• Analyzed how <b>real-time Kafka records</b> can be consumed through <b>Spark Structured Streaming</b> and displayed within Zeppelin notebooks.</li> </ul>	

**Dev Pandya**

**Kavya Patel**

**Dr. Samir Patel**

**Name & Signature of  
Student 1**

**Name & Signature of  
Student 2**

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