## **Serverless IoT Data**

## **Phase 1: Problem Definition and Design Thinking**

## In this part you will need to understand the problem statement and create a document on what have you understood and how will you proceed ahead with solving the problem. Please think on a design and present in form of a document.

**Problem Definition:** The project aims to transform a home into a smart living space using IBM Cloud Functions for IoT data processing. The goal is to collect data from various smart devices, process it in real-time, and automate routines for energy efficiency and home security. This involves designing the smart home setup, implementing data collection and processing, and leveraging IBM Cloud for storage and analysis.

**Design Thinking:**

1. Data Integration: Identify and integrate smart devices such as thermostats, motion sensors, and cameras into the smart home ecosystem.
2. Data Collection: Set up data collection from these devices, utilizing IoT protocols.
3. Real-time Processing: Implement real-time data processing using IBM Cloud Functions.
4. Automation: Develop automated routines for energy efficiency (e.g., adjustingthermostat settings) and home security (e.g., sending alerts on motion detection)
5. Storage and Analysis: Store data in IBM Cloud Object Storage and analyze it to gain insights into energy consumption, security events, and patterns.

**Assignment Notebook Submission**

File Naming Convention: **CAD\_Phase1**

After completion upload your file to your private GitHub account. Please give access to your faculty evaluators of your college and industry evaluator [ [IndustryEvaluator@skillup.online](mailto:IndustryEvaluator@skillup.online) ] to your private GitHub repository for evaluation process

Go to the Project Submission Part 1 section and add your college code, the link of your GitHub in the space provided, upload your documents, and click on submit.

### **PROJECT SUBMISSION PHASE 1**

This assignment has several steps. In the first step, you'll provide a response to the prompt. The other steps appear below the **Your Response** field.

#### Your Response

due Dec 31, 2023 05:30 IST (in 2 months, 4 weeks)**IN PROGRESS**

Enter your response to the prompt. You can save your progress and return to complete your response at any time before the due date (Sunday, Dec 31, 2023 05:30 IST). **After you submit your response, you cannot edit it**.

Top of Form

##### The prompt for this section

Please enter your **college code** in the below text box.

##### Your Response (Required)

##### The prompt for this section

Please paste your **GitHub Link** in the below text box.

**Note**: Please give access to your faculty evaluators of your college and industry evaluator [ IndustryEvaluator@skillup.online] to your private GitHub repository for evaluation process.

##### Your Response (Required)

* + - Save your progress

YOUR SUBMISSION STATUS:**THIS RESPONSE HAS NOT BEEN SAVED.**

##### File Uploads (Required)

* 1. Select one or more files to upload for this submission. Supported file types: .pdf, .doc, .ipynb, .docx, .py, .pptxUpload files

You may continue to work on your response until you submit it.

Bottom of Form

* 1. Submit your response and move to the next step

#### Assess Your Response

due Dec 31, 2023 05:30 IST (in 2 months, 4 weeks)**NOT AVAILABLE**

#### Your Grade: Not Started

### **Faculty Mentor Evaluation**

10.0 points possible

Your results will be evaluated by the faculty mentor post which the marks will be visible at your end.

### **Industry Mentor Evaluation**

10.0 points possible

Your results will be evaluated by the industry mentor post which the marks will be visible at your end.