Project Design Phase-II
Data Flow Diagram & User Stories

Date	23 October 2023
Team ID	592862
Project Name	Detect Smoke with The Help of IOT Data And Trigger A Fire Alarm

Data Flow Diagram:

1. **IoT Layer:** Start by drawing a circle or oval and label it as “Smoke Sensors”. This represents the IoT layer where various smoke sensors are installed in different locations and environments. Draw an arrow from this circle to indicate the flow of smoke data.

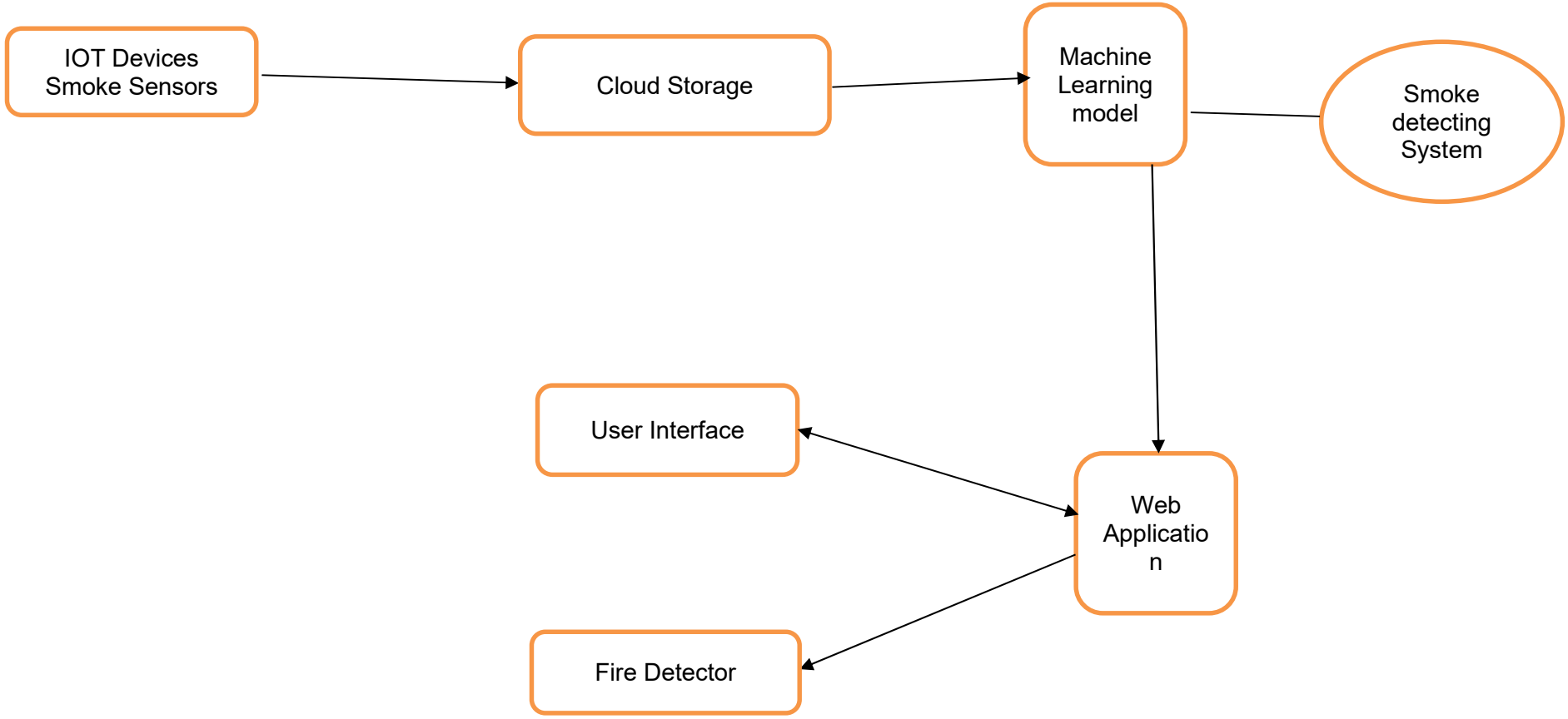
2. **Data Layer:** Draw another circle or oval and label it as “Cloud Platform”. This represents the Data layer that stores and processes the smoke data from the sensors. Connect the “Smoke Sensors” circle to the “Cloud Platform” circle with an arrow to represent the flow of data via MQTT protocol.

3. **Machine Learning Layer:** Draw a third circle or oval and label it as “Machine Learning Model”. This represents the Machine Learning layer that is trained on the smoke data and can detect smoke with high accuracy. Connect the “Cloud Platform” circle to the “Machine Learning Model” circle with an arrow to represent the flow of data for training and prediction.

4. **Application Layer:** Draw a fourth circle or oval and label it as “Web Application”. This represents the Application layer that provides a user-friendly interface for configuring, monitoring, and managing the smoke detection system. Connect both the “Machine Learning Model” circle and the “Cloud Platform” circle to the “Web Application” circle with arrows to represent the interaction via REST API.

   Provides a user-friendly interface for configuration, monitoring, and management.
   Communicates with the Machine Learning Model via REST API.
   Accesses and displays performance reports and data-driven insights.
   Sends configuration data to the Smoke Detection System.

5. **Fire Alarm:** Finally, draw a rectangle or square and label it as “Fire Alarm”. Connect the “Web Application” circle to this rectangle with an arrow to represent triggering of fire alarms when smoke is detected.


IOT Devices
Smoke Sensors
Cloud Storage
Machine
Learning
model
Smoke
detecting
System
User Interface
Web
Applicatio
n
Fire Detector

User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard					
	Monitoring smoke detection	USN-6	Monitor the smoke detection system continuously	The system should continuously monitor data from IoT smoke sensors and provide information to user	High	Sprint-1
		USN-7	I get an immediate notification	When smoke is detected by any sensor, I should receive an immediate notification via email or SMS, specifying the location of the sensor triggering the alert.	High	Sprint-1
		USN-8	I get the notification with time stamp	The notification should include a timestamp indicating when the smoke was detected.	High	Sprint-1
		USN-9	I can have access to all events once I login to UI	I should have access to a dashboard or interface where I can view a history of smoke detection events, including timestamps and locations.	High	Sprint-1

		USN-10	I can manually initiate or stop fire alarm	I should have the option to acknowledge and dismiss the alert or initiate a fire alarm, depending on the situation.	Medium	Sprint-2
Customer Care Executive						
Administrator						