IoT Video Report Summary - Spring 2025-2026 V2

Internet of Things Course | Watch, Understand, and Summarise a Real IoT Project

Assignment Overview

Each student is assigned one IoT project video from the curated list below. You must watch your assigned video carefully, understand the full project design, and complete a written summary using the template provided at the end of this document.

Submit the report as a hard copy.

> **Objective:** Apply the 6-step IoT Design Methodology from Lecture 06 to analyse a real-world IoT project. Identify the hardware, protocol, algorithm, cloud platform, budget, and testing approach used in your video.

Instructions

- Find your name in the Student Assignment Table (Section 3) and note your assigned video number.
- Go to the Video List (Section 2), find your video number, and open the YouTube link.
- Watch the full video. Take notes as you watch - do not rely on memory.
- Complete all 6 questions in the Summary Template (Section 4) in your own words.
- Submit your completed summary as a hard copy before the deadline.

> **Submission Deadline:** As announced in class. Late submissions lose 10% per day.

Student Assignment Table - Video List (45 Curated IoT Project Videos)

All videos below are from YouTube. Each explains a complete IoT project from hardware setup to cloud dashboard. The videos are suitable for beginners and use common components (ESP32, NodeMCU, Arduino).

#		Project Title	YouTube Link	Category
1	Abdulrahman Hassan Zakarya	**IoT Based Home Automation using ESP32 & Blynk 2.0**	https://www.youtube.com/watch?v=Qq9WmMf26Ww	**Smart Home**
2	Adam Muhammed Saber	**Control Devices Wirelessly using Relay & Blynk App**	https://www.youtube.com/watch?v=moSpFuxZELg	**Smart Home**
3	Ahmed Ashti Ahmed	**Smart Door Lock with RFID & Arduino**	https://www.youtube.com/watch?v=3xb2PLFjJxk	**Security**
4	Ahmed Mahdi Ahmed	**IoT Smart Doorbell with ESP32-CAM**	https://www.youtube.com/watch?v=-7MFWyVW378	**Security**
5	Ali Dlshad Rostam	**Smart Fan Control Using Temperature Sensor & ESP32**	https://www.youtube.com/watch?v=bHDO5ahwpm8	**Smart Home**
6	Ali Muhammed Ahmed	**IoT Based Water Pump Controller using ESP32 Blynk & float sensor**	https://www.youtube.com/watch?v=-FC8jpl5hDI	**Monitoring**
7	Arman Beshr Ahmed	**Voice Controlled Smart Home with Alexa & ESP32**	https://www.youtube.com/watch?v=H-gkysrJjAc	**Smart Home**

#		Project Title	YouTube Link	Category
8	Avan Jamil Kakil	ESP8266 based WiFi IoT IR controller	https://www.youtube.com/watch?v=8k0LMCFBQs0	Smart Home
9	Awara Hemn Hasan	IoT Air Quality Monitoring using MQ135 & ESP8266	https://www.youtube.com/watch?v=cFJPEvR0r9w	Environment
10	Aya Halmat Zyad	Weather Station using ESP32 & ThingsBoard Dashboard	https://www.youtube.com/watch?v=sLasmy385ME	Environment
11	Bahjat Dedar Kakamin	UV Index Monitoring System using ML8511 & ESP8266	https://www.youtube.com/watch?v=2kNt1OsJT-Q	Environment
12	Bayar Bashdar Majid Khudhir	IoT Based Soil Moisture Monitoring with ESP32	https://www.youtube.com/watch?v=WqP3gK8o5pA	Agriculture
13	Blnd Jamel Sabri	Smart Weather Station with Rainfall Detection & NodeMCU	https://www.youtube.com/watch?v=1O1kDmfUG68	Environment
14	Chalak Barzan Hadi Mawlood	CO2 and Gas Level Monitor with MQ-2 & Arduino IoT Cloud	https://www.youtube.com/watch?v=hSYCt7LrYxQ	Safety
15	Danyar Abdulqadir Abdullah	Gas Leakage Detection with SMS Alert using GSM & Arduino	https://www.youtube.com/watch?v=EPt0Mhz1Ym8	Safety
16	Farshad Fathi Hamad	Fire Detection System with Auto Alert using ESP8266	https://www.youtube.com/watch?v=X-JhKyEP0Es	Safety
17	Fenik Hussin Jumaa	Earthquake Detector with IoT Alert using ESP32	https://www.youtube.com/watch?v=ITXHkeO8uGQ	Safety
18	Hazhir Mamand Ahmed Dot Mala	Smart Flood Detection and Alert System with NodeMCU	https://www.youtube.com/watch?v=H921-WUgUj0	Safety
19	Hozan Saadi Mamand	Automatic Plant Watering System with ESP32 & Blynk	https://www.youtube.com/watch?v=Ix3a3ThsHfA	Agriculture
20	Isra Khalid Mustafa	Smart Greenhouse Monitoring System with ESP8266	https://www.youtube.com/watch?v=EJDUq2JCDj8	Agriculture
21	Kaiwan Kakl Hassan	IoT Based Fish Tank Monitoring System	https://www.youtube.com/watch?v=SMgAJ8-sAL0	Agriculture
22	Mahmood Emad Mohammed	Smart Irrigation System using Soil Sensor & ThingSpeak	https://www.youtube.com/watch?v=qtPWRv8dBI0	Agriculture
23	Mawa Sarkawt Muhtasm	Pulse Oximeter (SpO2 & Heart Rate) with ESP32 & MAX30100	https://www.youtube.com/watch?v=8SOTsR1k8-g	Health
24	Muhammed Kakakhan Ahmed Bakr	Patient Health Monitoring System with ThingsBoard	https://www.youtube.com/watch?v=Utlnd_FDB9A	Health
25	Mustafa Salim Sharif	Heart Beat Monitoring with New Blynk IoT App- Pulse Sensor with IoT | Serial communication	https://www.youtube.com/watch?v=V7I2ZWmMOQY	Health
26	Noor Muhammedamin Osman	GPS Vehicle Tracker with Google Maps using ESP32	https://www.youtube.com/watch?v=n1Od-jCw2zo	Tracking
27	Rawan Bestun Kareem	IoT Based Asset Tracking with MQTT & ThingsBoard Map	https://www.youtube.com/watch?v=T4R6SBopusM	Tracking
28	Rozhin Muhammad Mustafa	Smart Parking System with IR Sensors & NodeMCU	https://www.youtube.com/watch?v=tjLAjGi6O5Q	Smart City
29	Sahand Fahmi Mustafa	Alcohol Detection System for Vehicle Control with Arduino	https://www.youtube.com/watch?v=3d_JjjzNQgs	Safety
30	Sahar Fakher Muhammed	Traffic Signal Management and Control System based on density of vehicles and emergency vehicles	https://www.youtube.com/watch?v=LmQhJ1nYji8	Smart City
31	Shanaz Khalil Kareem Majeed	Smart Waste Bin with Fill-Level Alert using NodeMCU	https://www.youtube.com/watch?v=6Nh3nOrR9EE	Smart City
32	Sivar Edres Hamad	Street Light Automation with LDR & NodeMCU IoT	https://www.youtube.com/watch?v=WZTcUlsMG3c	Smart City
33	Staish Farhan Asaad	Smart Energy Monitor using PZEM-004T & ESP32	https://www.youtube.com/watch?v=-QspYOg5DRw	Energy
34	Yaran Dlman Ebrahim	Advanced IoT Prepaid Energy Meter using ESP32 & PZEM-004T with Professional Web Dashboard	https://www.youtube.com/watch?v=ZASGQB3DAaU	Energy

IoT Video Summary Report Template

Instructions: Complete all sections below for your assigned video. Write in your own words — do not copy from the video description.

Student Name:_____ Student ID: _____
Video Number:_____ Assigned Project Title:_____
YouTube URL:_____
Channel Name:_____
Video Duration:_____ Date Watched:_____

1. What is the problem this project solves?

Hint: Describe in 2-3 sentences what real-world problem the IoT system addresses.

2. What hardware components are used?

Hint: List the main components (microcontroller, sensors, actuators, modules).

3. What communication protocol is used?

Hint: Identify how the device communicates (Wi-Fi MQTT, Bluetooth, GSM, LoRa, etc.) and why.

4. Describe the algorithm / decision logic:

Hint: What does the device SENSE? What DECISION does it make? What ACTION does it take?

5. How is data displayed or monitored?

Hint: What cloud platform, app, or dashboard is used? What does the user see?

6. How could this project be improved?

Hint: Suggest one or two improvements or additional features.