There are many large and small scale IoT projects being rolled out globally, from smart farms to smart cities, in healthcare monitoring, transport, and for the use of public spaces.

Search the web for details of a project that interests you, ideally one close to where you live. Explain the upsides and the downsides of the project, such as what benefit comes from it, any problems it causes and how privacy is taken into consideration.

Answer

- I choose the project "IOT based Intelligent Gas Leakage Detector Using Arduino" from the website: https://nevonprojects.com/iot-based-intelligent-gas-leakage-detector-using-arduino/

IOT based Intelligent Gas Leakage Detector Using Arduino

Criteria	Exemplary	Adequate	Needs Improvement
* Upsides			
Early Detection of Gas Leakage	The project's primary benefit is its ability to detect gas leaks early, potentially preventing explosions and other accidents. This is a significant safety feature.	It helps prevent accidents by detecting gas leaks early.	- It detects gas. - It's a detector. - Don't mention of any upsides - It uses a sensor.
Real-time Monitoring	The system continuously monitors the LPG gas levels, providing real-time data.	The system continuously monitors gas levels, providing up-to-date information.	
Remote Notification (IoT)	The project leverages IoT to send alerts when gas levels exceed the set limit. This allows for remote monitoring and timely action.	It can send notifications to users' devices when a leak is detected.	
Automatic Shutoff	The solenoid valve automatically shuts off the gas supply	The system can automatically turn off the gas supply using	

	when a leak is detected, minimizing the risk of further leakage and potential hazards.	a solenoid valve.	
Visual Indication	The RGB LED provides a clear visual indication of the gas levels (green for safe, red for unsafe).	The RGB LED provides a clear visual signal.	
Customizable Threshold	Users can set the minimum and maximum gas level parameters according to their needs.	The system allows users to adjust the gas level at which the alarm is triggered.	
Versatile Application	The system can be installed in homes, hotels, LPG storage areas, and other locations where gas leaks are a concern.	This detector can be used in various settings, such as homes, kitchens.	
Cost-Effective	Arduino and MQ5 sensors are relatively inexpensive, making the system cost-effective.	Using Arduino and readily available sensors makes this a relatively affordable solution for gas leak detection.	

*Downsides

Reliance on WiFi	The IoT functionality depends on a stable WiFi connection. If the connection is lost, remote notifications may not be sent.	The system relies on a stable WiFi connection for remote alerts.	● It's hard to make. ● ● It uses wires. ● It needs batteries. ● Don't mention any downsides. ● It might break.
Sensor Accuracy	The accuracy of the MQ5 sensor can be affected by environmental factors like temperature and humidity. Regular calibration may be required.	The MQ5 sensor's accuracy can be affected by environmental factors.	

Power Supply Dependency	The system requires a continuous power supply. Power outages could render the system ineffective.	The system needs a constant power supply.	
Limited Range	The MQ5 sensor has a limited detection range. Larger areas may require multiple sensors.	The sensor can only detect gas leaks within a certain range.	
False Alarms	The sensor might trigger false alarms due to other gases or environmental factors.	The sensor might trigger alarms due to other gases.	
Maintenance	The system requires regular maintenance, including sensor cleaning and software updates.	The system requires regular upkeep.	
Complexity	Setting up and configuring the IoT functionality might be complex for some users.	Setting up the IoT features and configuring the system might be difficult.	