LITERATURE SURVEY

S.NO	YEAR	TITLE	AUTHOR	PROJECT DESCRIPTION
1	2016	Implementation of hazardous chemical gas monitoring system using unmanned aerial vehicle (UAV)	Fadhil Mochammad; Aditya Rachman Putra; Bambang Riyanto Trilaksono	Unmanned aerial vehicle (UAV) with hexacopter platform is an effective tool to monitor the level of hazardous chemical gas. The ability to fly at low speed autonomously allows this system to map the hazardous chemical gas level and the hazardous chemical gas distribution in each section of an area. To do this task, an on-board data acquisition system is needed on the UAV to measure the hazardous chemical gas level based on the GPS position of the measurement. The user can interact with UAV to specify the scanning scenario.

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2	2021	Real-Time Design of HMI for Hazardous Gas Control and Monitoring System in Pakistani Mines, Natural Gas Areas and Fertilizer Plants	Misha Urooj Khan ; Aneela Shaheen ; Muhammad Zeeshan ; Asad-ur-Rehman ; Muhammad Adnan ; Malik Tayyab Rehman	Gas leakage is a serious issue in commercial areas and domestic buildings and a major cause of concern in bistros, populated neighborhoods, and automobiles that operate upon compressed natural gas (CNG). Because of the increased gas leaks, residential safety has been a serious concern in recent years. Hazardous gases such as propane and methane are flammable, and if contained in close proximity might trigger explosions Installing gas monitoring systems in sensitive areas is one of the preventative techniques for eliminating fatalities caused by gas leakage.

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3	2017	MQTT based environment monitoring in factories for employee safety	Ravi Kishore Kodali; Aditya Valdas	Safety of employees, in any industry, especially at the factory level is a important aspects. In factories where working conditions are harsh and employees need to take great caution while going about their work, it is common for mishaps to occur.It is important that there is a measure of safety for the employees from any possible hazardous situations. As a solution to this problem, we propose a monitoring system to be installed in factories. With this system, we will be able to monitor critical safety parameters of the working environment in these factories so that we are well-aware of the safety situation and the possibility of occurence of any mishap. For the design of this system, we use an ESP8266 Wi-Fi chip enabled microcontroller NodeMCU.

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4	2009	Camera systems in hazardous locations to monitor and control the separation of liquid waste products in chemical plants	Ingo Emde ; Wolfgang Berner ; Klaus Mertens	It is essential to have high-quality measuring systems for chemical processes in order to obtain reliable data for the control system. For some process applications it is difficult to find a dependable method to measure important values that are vital for the end product. In the case of a liquid waste product processing facility the difficult measuring task is to monitor the separation of Anilin and water in a vessel. In this application, standard measuring methods cannot monitor the process reliably, especially during a start up phase. To avoid cost-intensive and time-consuming monitoring by staff directly at the vessel, the task can be solved by using cameras to monitor the process. The additional problem is to design such a solution for a facility that is classified as a Zone 1 hazardous location.