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PROJECT DOCUMENTATION

ARDUINO FIRE, SMOKE AND GAS ALARM

MAXIMILIAN WENKEBACH

MXI DEVELOPMENT

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License

Contact Details

Should you for what ever reason need to contact me, please make use the details provided below to do so. I would gladly answer most questions you might have. Please be patient when I comes to responses, I will most likely get back to you, but it could take me a few days.

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Code and Circuit Examples

Here you will find links to the source code on GitHub as well a Circuit examples of how to set this system up.

Download the Sourcecode from GitHub

Check out the Circuit Example on Thinkercad

Should you at any time find any part of this project helpful or interesting, let me know! I would love to hear what you have to say about this. The code on GitHub is licensed under the MIT license and the Circuit example on Thinkercad under the “Creative Commons Attribution 3.0 Unported (CC BY 3.0)” license.

Background and Project idea

This Project began as a School project for a course about microprocessors. This was my first time working with Arduinos or microprocessors in general.

For the project, we were asked to pick a topic, and looking through the available components on Thinkercad, I decided on the idea of creating a Smoke / Fire and Gas Waring system utilizing multiple Arduinos. So I started to work and, at the end of the week, reached the point you see represented on the GitHub Repository and the Thinkercad Sketch.

In the beginning, I didn't plan on spending to much time working on this project; but after a few hours of working on the project, I got hooked and I started to truly become fun to work on.

Despite this being my first project utilizing Arduinos I'm not new to software development. I've been working in the field since around summer 2015, mainly focusing on languages like Python, C#, and PHP.

The Project in detail

I wanted to create a system that could alert a potential user to a gas leak, a Fire, or an abnormal temperature spike; and automatically activate a ventilation system to Remove potential harmful gases such as Carbon Monoxide or Smoke as well as Alerting the user to their Presence.

Later in the project, I decided on also incorporating an LCD Display to quickly and easily communicate the Systems state to the User.

Reflection

In general, I'm happy with how the project went as well as having been allowed to learn how to work with Microcontroller systems such as the Arduino.

What would I improve, given the opportunity?

I think my Planning of the project was slightly off, and in hindsight, I should have made more concrete plans of where I wanted this project to go instead of just winging it, nevertheless, i got there in the end.

If I would Start this Project all over again, I would make sure to have a plan on how to approach this task as well as laying out a comprehensive list of features and Ideas and sticking to them.