EEE088F 2022

Concept Proposal Template

**Gradescope instructions:**

You’ll be uploading this as a pdf (1 per team) to gradescope and labelling the pages according to which sections(Qs) the pages are related to. Multiple pgs per section is fine, also multiple sections on the same page is also fine. See this 3min examples video of how to upload to Gradescope here: <https://help.gradescope.com/article/ccbpppziu9-student-submit-work#submitting_a_pdf>  
  
The recommended approach is to use this template, complete each section as a team making use of the headings provided and deleting the instructions in each section.

# Q1 Enviro sensing HAT Concept [5]

(Describe what your HAT’s use case is, what it will attach to and in what scenario(s) someone would use it? Keep it very short, no more than 200 words at most.)

The HAT in the our design project a CO2 detector and Temperature sesnor with an onboard FTDI ic chip. Some scenarios in which the HAT will be mostly used include; Fire Detection where CO2 levels and temperature levels will we monitor and alarm systemed will be triggered if the levels rise to the extreme

# Q2 Requirements [10]

The lecture discussed how one approach to capturing requirements is to think through the *user stories* that apply to a product/system/device. List 3 user stories that apply to your concept. These could be 3 different ways or reasons someone would use your HAT, eg 3 different situations it would be useful in, or even better would be if you can think of 3 different types of user and how they would use your HAT. Write down each use case scenario or user role and list **at least 3** **requirements** derived from that role/scenario.

The template shows 3x3 but put as many requirements and roles as you see.

## Scenario1 (Fire Detection)

* Detect CO2 levels and increase in temperature in the environment
* Trigger alarm/buzzer using 3.3V output
* Run of Rechargeable Lion Battery

## User role/Scenario2

* R2.1:
* R2.2:
* R2.3:

## User role/Scenario3

* R3.1:
* R3.2:
* R3.3:

# Q3 Project Subsystems Block Diagram [5]

Break development of the HAT into subsystems that can each be developed and tested independently. Provide a block diagram of your HAT indicating the subsystems and key modules/components within each here first. Provide sufficient labels on this diagram that another electrical engineer would be able to skim it and know what each modules’ primary function is, how they interface with each other/connect up and what the HAT as a whole does.

# Q4: Link to Team Git Repo [5]

Repository linked to must: <https://github.com/lukhanyoVena808/EEE3088F_PROJECT>

* Have all team members added as collaborators
* Have a structure
* Have a draft Readme.md file
* Be public