**IESTI01 – TinyML - 2021.2**

**Final Group Project Proposal**

**Project Proposal Delivery date: October 20th**

**Groups should have preferable a minimum of 3 and a maximum of 4 participants.**

## **Suggested Project Template**

1. **Project name**
2. **Team member names, number (if applicable) and, Institution**
3. **Project Objectives (Goal) - short description**
4. **Longer project description**
5. **References (including other code or data), sources of inspiration**
6. **Descriptions of the following, at whatever depth the team feels appropriate:**
   1. **Block Diagram**
   2. **Hardware to be utilized**
   3. **Data collection**
   4. **Preprocessing**
   5. **Model design**
   6. **Optimizations**
   7. **In system inference (Deploy)**
7. **Issues or roadblocks the team envision and potential solutions**
8. **The top unresolved question(s) the team have at this point**

## Suggested Public Dataset repositories to be explored:

* <https://www.kaggle.com/datasets>
* <https://archive.ics.uci.edu/ml/datasets.php>
* <https://knowyourdata.withgoogle.com/>
* <https://datasetsearch.research.google.com/>

## Previous Projects Inspiration:

1. **IESTI01 2021.1 - Group Presentations**
   * Group 1 - Seismic Detection [[Docs]](https://github.com/Mjrovai/UNIFEI-IESTI01-T01-2021.1/blob/main/00_Curso_Folder/2_Applications/Group_Projects-Final%20Reports/RelatorioTinyML_TrabalhoFinal_1-Abalos.pdf) [[Video]](https://youtu.be/vswoWrOpC1s)
   * Group 2 - Fire Detection [[Docs]](https://github.com/Mjrovai/UNIFEI-IESTI01-T01-2021.1/blob/main/00_Curso_Folder/2_Applications/Group_Projects-Final%20Reports/Projeto_final_Fire_detection/trabalho_final_Fire_Detection.pdf) [[Video]](https://youtu.be/70ySBIPzvJk)
   * Group 3 - Covid Detection (cough) [[Docs]](https://github.com/Mjrovai/UNIFEI-IESTI01-T01-2021.1/blob/main/00_Curso_Folder/2_Applications/Group_Projects-Final%20Reports/Project__Covid_19_Detection_by_Cough.pdf) [[Video]](https://youtu.be/7Lca8lfdKAI)
   * Group 4 - Mask Detection [[Docs]](https://github.com/Mjrovai/UNIFEI-IESTI01-T01-2021.1/blob/main/00_Curso_Folder/2_Applications/Group_Projects-Final%20Reports/relatorio_final_deteccao_de_mascara.pdf) [[Video]](https://youtu.be/jeRetSaqm1w)
   * Group 5 - Personal Trainer [[Docs]](https://github.com/Mjrovai/UNIFEI-IESTI01-T01-2021.1/blob/main/00_Curso_Folder/2_Applications/Group_Projects-Final%20Reports/IESTI01_ProjetoFinal_PersonalTrainer.pdf) [[Video]](https://youtu.be/RxlHRyaRfBc)
2. **[Harvard CS249r – TinyML - Final Projects](https://sites.google.com/g.harvard.edu/tinyml/finalprojects?authuser=0)**

## Suggested Project Workflow

Diagram, timeline

Description automatically generated

## Final Comments

The Project Proposal to be delivered **is not binding**, what means that the group can decide later keep this project or to develop another one completely different.