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Analysis of air quality in UPC classrooms: Environmental Health

Project Proposal and Work Plan

**WRITTEN BY REVIEWED AND APPROVED BY**

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Date: 27/03/2024 Date:

##### Project overview and goals

The project is being carried out at *Universitat Politècnica de Catalunya*. It consists on analyzing the air quality within the classrooms of *Campus Sud*, a specific zone of the university. Historical air quality data has been collected over the past years, which will be the base resource for this project. In more detail, the data analysis will be performed visually, creating visualizations that facilitate the achievement of the project’s goals in an understandable and user-friendly way.

The project main goals are:

1. Clean the data to ensure reliability and suitability for future analysis.
2. Create visualizations that best address the questions I aim to answer, facilitating their interpretation.
3. Develop an application/interface that integrates all visualizations cohesively and in a user-friendly manner.
4. Describe the relationship between energy consumption and both external and internal temperatures.
5. Compare the air quality across different classrooms and identify the primary factors affecting it.

##### Project background

The project is proposed by the supervisor but its goals and scope are decided by the author from the scratch. It is an independent project not associated with any company research or development project.

##### Work Plan

## Tasks and Milestones. Gantt Diagram

Tasks:

1. Take a look at Sirena’s air quality data and gain a comprehensive understanding.

Time period: 1 - 10 March

1. Download the relevant data for the project.

Time period: 10 March

1. Clean and format the data to ensure it’s adequate for the project.

Time period: 11 - 20 March

1. Generate some questions to solve (project’s initial goals brainstorming)

Time period: 15 - 20 March

1. Learn about visualization libraries that suit the project’s needs.

Time period: 20 - 30 March

1. Create charts to solve some of the initial questions, involving iterative refinement based on supervisor’s feedback and new questions that might emerge.

Time period: 20 March - 20 May

1. Document project process.

Time period: 1 March - 15 June (during the whole project)

1. Design and develop an application/interface that integrates all the visualizations.

Time period: 20 May - 15 June

1. Write the final memories of the project, with its findings and conclusions.

Time period: 1 June - 15 June

1. Prepare the project presentation.

Time period: 15 June - 25 June

Milestones:

1. Submission of the initial project plan (15 March 2024)
2. Submission of the progress report for critical project review (30 April 2024)
3. Submission of the project final report (aprox. 15 June 2024)
4. Project presentation (aprox. 25 June 2024)

## Meeting and communication plan

We have agreed to schedule a fixed meeting every two weeks to monitor the process. However, communication is open at all times via Discord or Email, so that any spontaneous questions or concerns can be addressed.

##### Generic skills

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| **#** | **Generic Skill** | **Assessed** |
| GS1 | Innovation and entrepreneurship | X |
| GS2 | Societal and environmental context | X |
| GS3 | Oral and written communication | X |
| GS4 | Teamwork |  |
| GS5 | Survey of information resources |  |
| GS6 | Autonomous learning | X |
| GS7 | Communication in a foreign language | X |
| GS8 | Gender perspective |  |
| GS9 | Environmental ethics perspective | X |