Analysis of air quality in UPC classrooms: Environmental Health

Project Proposal and Work Plan

WRITTEN BY

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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
2. Download the relevant data for the project.
   Time period: 10 March
3. Clean and format the data to ensure it's adequate for the project.
   Time period: 11 - 20 March
4. Generate some questions to solve (project's initial goals brainstorming)
   Time period: 15 - 20 March
5. Learn about visualization libraries that suit the project's needs.
   Time period: 20 - 30 March
6. 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
7. Document project process.
   Time period: 1 March - 15 June (during the whole project)
8. Design and develop an application/interface that integrates all the visualizations.
   Time period: 20 May - 15 June
9. Write the final memories of the project, with its findings and conclusions.
   Time period: 1 June - 15 June
10. 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

#	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