Business Proposal Air Quality Project

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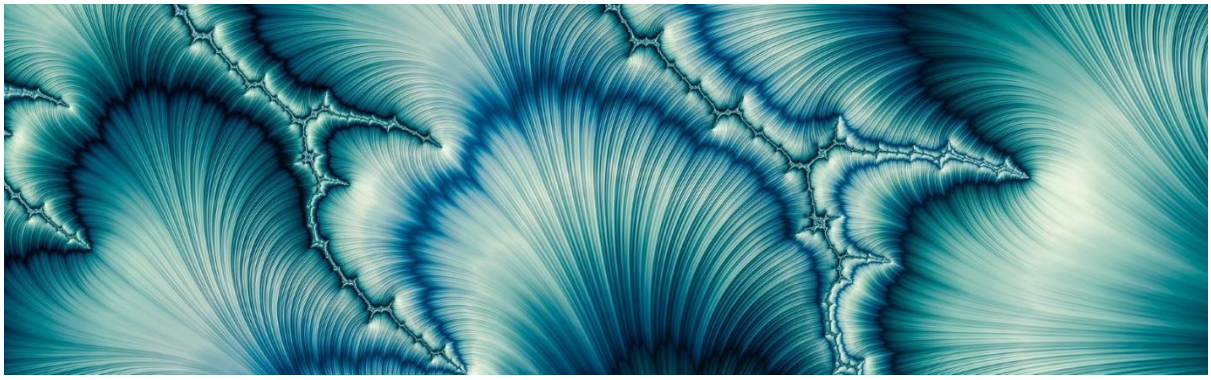


Introduction

Air Quality is a rising concern in these times. With the increase in pollution levels, there has been a significant impact on human health and the environment. As a result, there is a growing demand for solutions that can monitor and improve air quality. To be more specific, the quality of air in Eindhoven is poor. As a team, it is important to have people become aware of the pollution in the air. This will be done by using the dataset provided by AiREAS and to come up with an appropriate project.

AiREAS is an initiative set up by Marco van Lochem and Jean-Paul Close. Both come from a background in international business and technology. They found that to work towards their goal of a clean and healthy living environment a new approach was necessary. Namely, to gather people around them prepared to take responsibility for their own part in progressing the AiREAS project, which by these means forms a cooperative association.

Problem definition

Although Eindhoven can be labelled as a smart city, that title comes with many downsides, one of them being sacrificing the quality of air for the sake of progress. The better the air the healthier the people as being exposed to heavily industrial zones that pollute air will worsen your general health. People don’t easily change their minds when presented with new information, so we need to expose more people to be aware of their impact on the air pollution.

Research Questions

In this paragraph, the Research questions will be stated which will aid in understanding the domain.

Main question

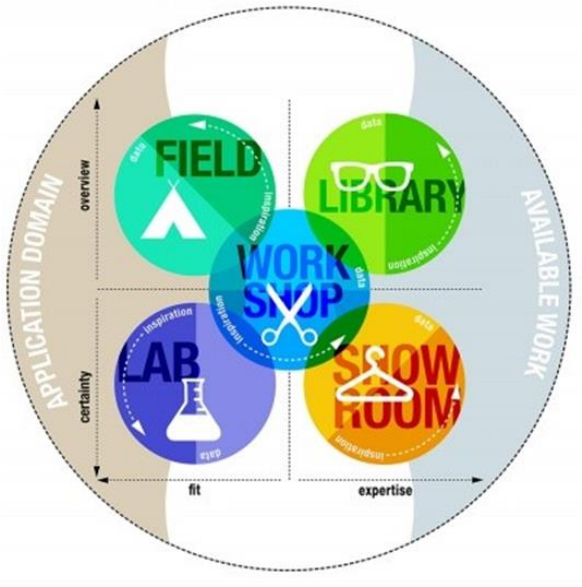
How could a chatbot with AI technology be used to raise awareness among residents in Eindhoven about the impact of air pollution on their life and give them suggestions to improve their health? ~~(And encourage them to act towards improving air quality)~~

Sub-questions

1. What exactly is Air Pollution?
2. What are the current levels of air pollution in Eindhoven and what are the major sources of pollution?
3. What are the key features and capabilities required for an AI chatbot to effectively raise awareness among residents about air pollution?
4. How can the AI chatbot be designed to be engaging and motivating?
5. What are the potential challenges and limitations of using an AI chatbot to raise awareness about air pollution among residents in Eindhoven?
6. What prompts can a chatbot receive from users that relate to air quality/the environment & what kind of answer would be desired from the chatbot?
7. How does Air Quality affect the general public at present and in the future?
8. How can machine learning algorithms be used to answer questions of users regarding air pollution?

Methodology

This project will be using the AI project Methodology. This means there are multiple sprints each dedicating to one part of the project. Furthermore, the DOT framework will be used. The project will be done in sprints, each being 4 weeks. To keep track with tasks and project deadlines, a Trello board will be used.



Deliverables / Scope

- Air Quality focused chatbot prototype
- Business Proposal
- Data Analysis Report
- Project Report
- Handoff document

Must have	Should have	Could have	Won't have
Chatbot	Frontend client	Personal Reccomendations	Future air quality predictions
NLP model	Mobile-app	Local Reccomendations	User feedback
Air quality information	Live air quality info	Gamification	Image-generation
Reccomendations	Proper UI/UX	Data visualizations	Computer vision
EDA	Traffic data	Accounts	User feedback
Air quality information	Deployed API	Voice integartion (Alexa)	Pre-written prompts
Environmental awerness	Special events	Personalities	Personalization
Health impacts		Mascot	
		More Data	

Timeline

Date	Week	Sprint	Activities
2023/02/28	03		Business Proposal
2023/03/06	04		
2023/03/13	05		
2023/03/20	06		EDA (March 16)
2023/03/27	07		
2023/04/03	08		
2023/04/10	09		Data preparation (April 16)
2023/04/17	10		Showroom poster (April 23)
2023/04/24	11		Peer review assessment (April 30)
2023/05/01	--		Vacation
2023/05/08	12		
2023/05/15	13		
2023/05/22	14		
2023/05/29	15		
2023/06/05	16		
2023/06/12	17		
2023/06/19	18		Showroom presentation (June 23) Two-page paper (June 23)
2023/06/26	19		Project transfer (June 27)