



Water Clean and Sanitation

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1 INTRODUCTION

Overview

I am working on the United Nations sustainability development goal number six which is looking to improve access to drinking water, reduce water waste, incentivize better usage of water product naturel recourses and mitigate waiver related impacts.

A brief description about your project

My solution faced on the ability provide really a centralized mean to access data that will both enable costumer & local government to accurately and efficiently access clean water while also educating peoples and students on clean water and sanitation for the sustainable and scalable solution. This solution will also solve businesses and government challenges by getting information of the sites were to work. The dashboard will give data required to create businesses and option to start new project based on locations.

Purpose

Coming up with solutions to help people to make better use of water. Right now, is an investment in the long-term future of billions of people all over the world.

The use of this project. What can be achieved using this.

We see the opportunity here to use technology in some simple ways that's readily accessible to people around the world to help people to have quick and ready access to the water.

2 LITERATURE SURVEY

Existing problem

Half of the people in the world don't have access to clean water on regular basis. A quarter of the people in the world don't have clean water for cooking and washing. There's probably about half of the hospital beds in the world could be made empty if we just had a clean water more readily available.

Existing approaches or method to solve this problem

So many sites of government and private sites and monitoring costly IoT devices are available

Proposed solution

What is the method or solution suggested by you?

Our solution faced on the ability provide really a centralized mean to access data that will both enable community members to accurately and efficiently access clean water while also educating community on clean water and sanitation for the sustainable and scalable solution.

3 THEORITICAL ANALYSIS

Hardware and software requirements of the project
Hardware - Laptop

Software used as follows



IBM Watson Desktop



IBM Watson Studio



Watson IoT



IBM Cognos Analytics



IBM watson Assistant



IBM Cloud



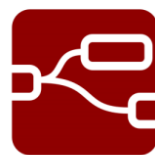
Elyra



Watson Machine Learning



GeoJson Maps



Node Red

4 EXPERIMENTAL INVESTIGATIONS

Analysis or the investigation made while working on the solution.

Starter kit: Clean water and sanitation

Understand how technology can improve access to clean drinking water, reduce water waste, and protect natural resources.

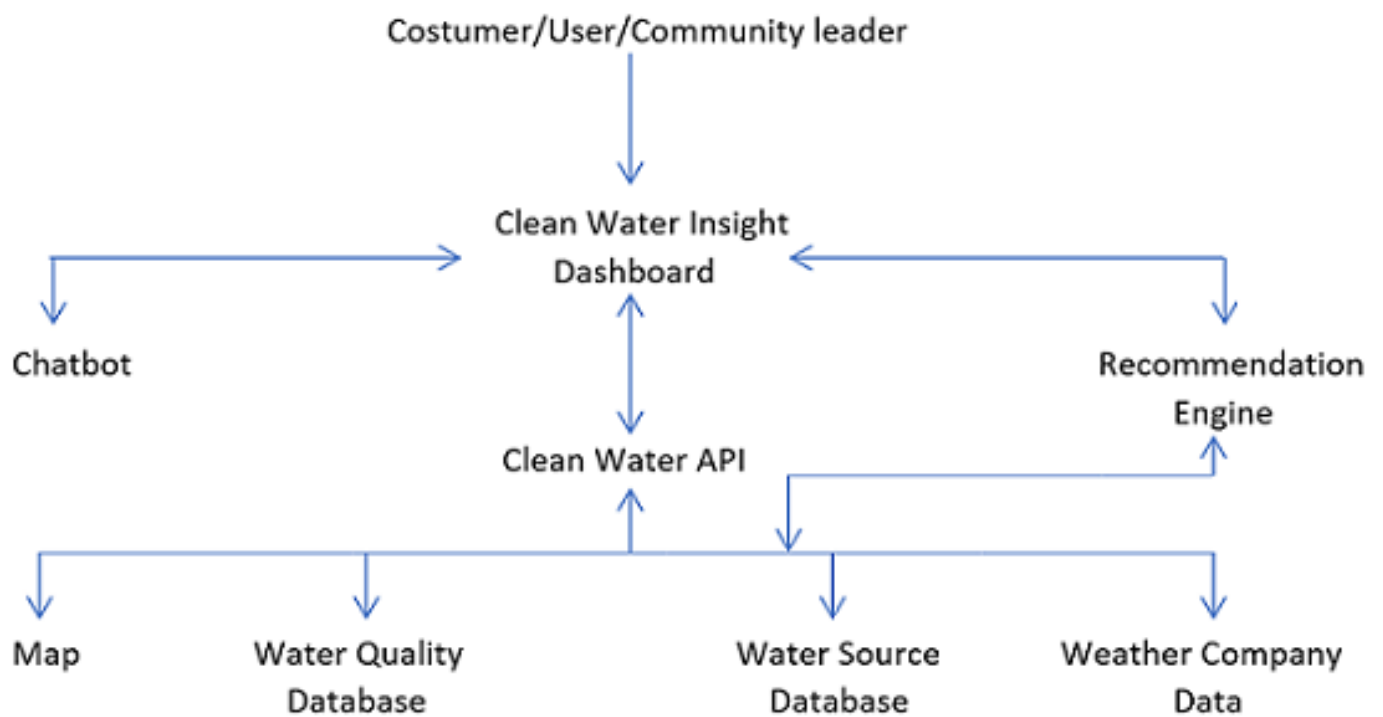
In this session, I got an overview of the [Clean water and sanitation starter kit](#) from the experts who created it. To encourage optimal water choices by consumers and local governments and to incentivize water sustainability, the starter kit contributors propose devising and implementing an API for water data collection and dissemination.

With an API, I could have a centralized way to:

- Query geolocations of sustainable water sources
- Simplify coordination and funding for water construction projects
- Explore educational tools to support water sustainability and clean water access
- Enable transparent water usage, cleanliness results, and site-to-site comparison
- Access plain language case studies and legislation

5 FLOWCHART

Diagram showing the control flow of the solution



6 RESULT

Final findings (Output) of the project along with screenshots.

Solution Screenshot

Arizona River Basin

Show Maps

Show Proctor Creek Water Basin

Show NF Peachtree Water Basin

Show Nancy Creek Water Basin

Show Long Island Creek Water Basin

Show South River Water Basin

Show Camp Creek Water Basin

Show Flint River Water Basin

Show Peachtree Creek Water Basin

Show Bellwood Quarry

Show Utoy Creek Water Basin

Show SF Peachtree Creek Water Basin

Show Intermittent Creek Water Basin

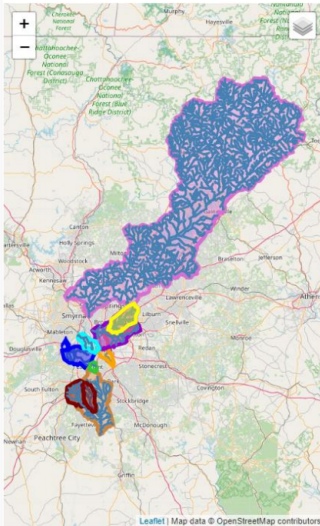
ZipCode - Water Quality Report

Enter a ZipCode *

SUBMIT

CANCEL

Arizona and Water Basin



Contaminants

Toxin	Sample	EPA Limit	To...	Health Risk
ARSENIC	0.0012500	0.01	MG/L	Skin damage or problems with ci...
BARIUM	0.4590000	2	MG/L	Increase in blood pressure
CHROMIUM	0.0005500	0.10000000000000000...	MG/L	Allergic dermatitis
COMBINED RADI...	1.4000000	5	pCi/L	Increased risk of cancer
RADIUM-228	0.0000000	0	MG/L	
CADMIUM	0.0002400	0.00500000000000000...	MG/L	Kidney damage
COMBINED URA...	0.9300000	30	µg/L	Increased risk of cancer, kidney t...
FLUORIDE	0.2200000	4	MG/L	Bone disease (pain and tenderne...
LEAD	0.0015200	0.01499999999999999...	TT: Act...	Infants and children: Delays in ph...
COPPER, FREE	0.0640000	1.3	TT: Act...	Short-term exposure: Gastrointes...
DICHLOROMETH...	0.0003500	0.00500000000000000...	MG/L	Liver problems: increased risk of ...
TETRACHLOROET...	0.0048800	0.00500000000000000...	MG/L	Liver problems: increased risk of ...
NITRATE	2.7800000	10	MG/L	Infants below the age of six mon...
BROMATE	0.0055000	0.01	MG/L	Increased risk of cancer
1,1,1-TRICHLORO...	0.0002900	0.20000000000000000...	MG/L	Liver, nervous system, or circulat...
TOLUENE	0.0007600	1	MG/L	Nervous system, kidney, or liver ...
SELENIUM	0.0017100	0.05000000000000000...	MG/L	Hair or fingernail loss: numbness...
NITRITE	0.2540000	1	MG/L	Infants below the age of six mon...
TOTAL HALOACE...	0.0160000	0.05999999999999999...	MG/L	Increased risk of cancer
TTHM	0.0608000	0.08000000000000000...	MG/L	Liver, kidney, or central nervous s...
MERCURY	0.0002000	0.002	MG/L	Kidney damage

7 ADVANTAGES & DISADVANTAGES

List of advantages and disadvantages of the proposed solution

Advantages	Disadvantages
One can conect IoT to check Water Quality	It can take much time to load
Dashboard can give you data what you need	-
Chatboat answers your queston smartly	-

8 APPLICATIONS

The areas where this solution can be applied

- **Dashboard:**

The user or community leader accesses a Clean Water Insights Dashboard. The insights dashboard requests the Clean Water API for data that the user wants (including queries made on a chatbot).

- **Chatbot:**

The user can converse with a chatbot to get necessary information, and the insights dashboard can act as an orchestration application for the chatbot.

- **API:**

The Clean Water API component retrieves the required data from various sources and aggregates them as necessary.

- **Recommendation Engine:**

The Clean Water Insights Dashboard can get recommendation and prediction information from a recommendation engine.

9 CONCLUSION

Solution is created to learn, understand and to create global impact to the world by doing practical work on ground not just virtually and this solution is small contribution toward clean water and sanitation.

Thank You!!!

10 FUTURE SCOPE

As mentioned in General Description that solution will also give opportunity to businesses and government by detailed getting information of the sites were to work. The dashboard will give data required to create businesses and option to start new project based on locations. This solution will impact on society by educating students, costumers and visitors importance of Clean Water & Sanitation. And also learn global impact of this solution.

11 BIBILOGRAPHY

References of previous works or websites visited/books referred for analysis about the project, solution previous findings etc.

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ADVANTAGES & DISADVANTAGES

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FLOWCHART

FUTURE SCOPE

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THEORITICAL ANALYSIS

12 APPENDIX

Source Code

Git Repository Link :

<https://github.com/smartinternz02/SBSPS-Challenge-5241-Clean-Water-Sanitation>

Solution Video link : https://youtu.be/ty-8_d2-Nvw

A photograph of two young children, a boy and a girl, playing under a waterfall. The boy, in the foreground, is wearing a bright blue t-shirt and orange shorts, and is reaching out with his hands to feel the water. The girl, slightly behind him, is wearing a yellow shirt and a patterned skirt, also smiling and looking at the water. The waterfall is a thin, vertical stream of water cascading down, creating a misty spray at the bottom. The background is a lush, green, out-of-focus landscape. The text "Thank You!!!" is overlaid in the upper right corner in a white, bold, sans-serif font.

Thank You!!!