

**SHAWINVERA**

TO ENSURE CLEAN AND SAFE WATER FOR ALL URBAN COMMUNITIES  
THROUGH EFFECTIVE MONITORING

2024

# PITCH DECK






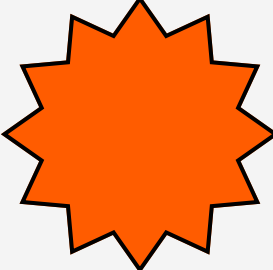
# PROJECT OVERVIEW & SDG ALIGNMENT

- This project focuses on SDG 6: Clean Water and Sanitation, specifically improving water quality monitoring in urban areas. Urban water sources face contamination challenges, which can impact public health. By leveraging data, we aim to enhance the monitoring of water quality and ensure clean water availability.






# PROBLEM DEFINITION

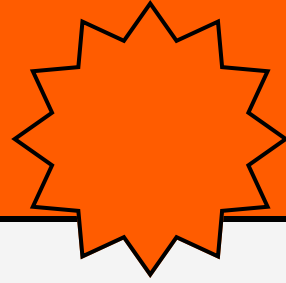
- 
- 
- Urban water sources are exposed to various pollutants from industrial runoff, aging infrastructure, and improper waste disposal. Inadequate monitoring of water quality can result in contamination going undetected, posing risks to communities. Our solution aims to address this gap by providing an efficient water quality monitoring system that identifies contamination early and facilitates quick action.



# DATABASE DESIGN

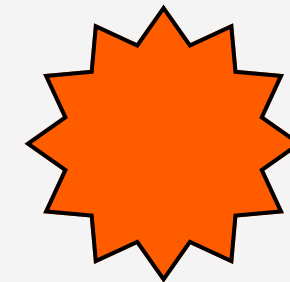
The database is designed to capture detailed information on water sources, quality tests, sanitation facilities, and maintenance records. The ERD shows the relationships. WaterSources stores information on different water bodies. WaterQualityTests captures the results of tests performed on each water source. SanitationFacilities tracks data on sanitation infrastructure. MaintenanceRecords logs maintenance activities for sanitation facilities.





# DATABASE SCHEMA


Our database schema is designed to support the efficient storage and retrieval of water quality data.

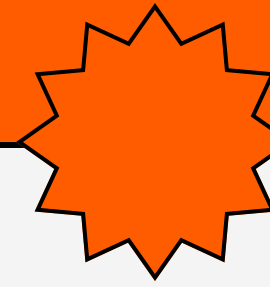




## Data Analysis Insights

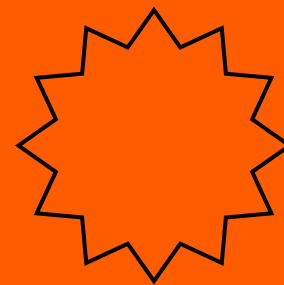
To extract meaningful insights, SQL queries were written to analyze water quality data.  
eg Average Contaminants Level by Water Source






# EXCEL DATA IMPORT & ANALYSIS



To further analyze the data, we imported it from the database into Microsoft Excel using the Data tab. The imported data allowed us to create detailed pivot tables to summarize the water quality test results and sanitation facility maintenance records





# KEY METRICS & VISUALIZATIONS




Bar Chart: Shows the average contaminants levels for each water source.



Pie Chart: Represents the distribution of water quality test results



Line Chart: Displays the fluctuation of pH levels across different test dates."



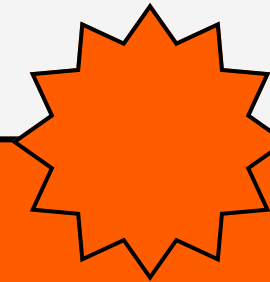




# EXCEL DASHBOARD DEMONSTRATION



he interactive dashboard in Excel provides a real-time overview of water quality and sanitation metrics



# CONCLUSION & NEXT STEPS

In conclusion, this project provides a data-driven solution to monitor water quality in urban areas, directly addressing SDG 6. By tracking contaminants, pH levels, and facility maintenance, the system helps ensure that communities have access to safe and clean water. Future steps include integrating IoT sensors for real-time data and expanding the system to cover rural water sources