GeoHealth

Wastewater Infectious Disease Monitoring

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Our Team

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Data science, Project Management

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Front-end

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Data science, ML

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Problem Context

01.

Infectious disease poses a significant risk to public health

02.

The health literacy gap in the United States is widening

03.

There is a lack of accessible and localized data

04.

Data dissemination tends to be inefficient

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Problem Statement

How might health conscious individuals achieve improved public health literacy so that they can utilize location specific health metrics to prevent the spread of health risk?

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Key Research Insights

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Personas

Erik, a tech-savvy software developer, urgently needs an intuitive health management platform to easily monitor his health conditions and assess local health risks.

Erik

Local Seattle Resident

Occupation: Federal Employee

Interests: Reading

Tech Skill: Limited

Health Literacy: Mid

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Key Features

Localization

Localized health metrics

Wastewater

Wastewater data utilization

Risk Score

Personalized Risk Assessment

Interactivity

Interactive data visualization

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User Testing & Validation

Testing

MVP testing with target audience

Feedback

User feedback on usability & navigation

Effectiveness

Effectiveness of localized data

Iteration

Design improvements

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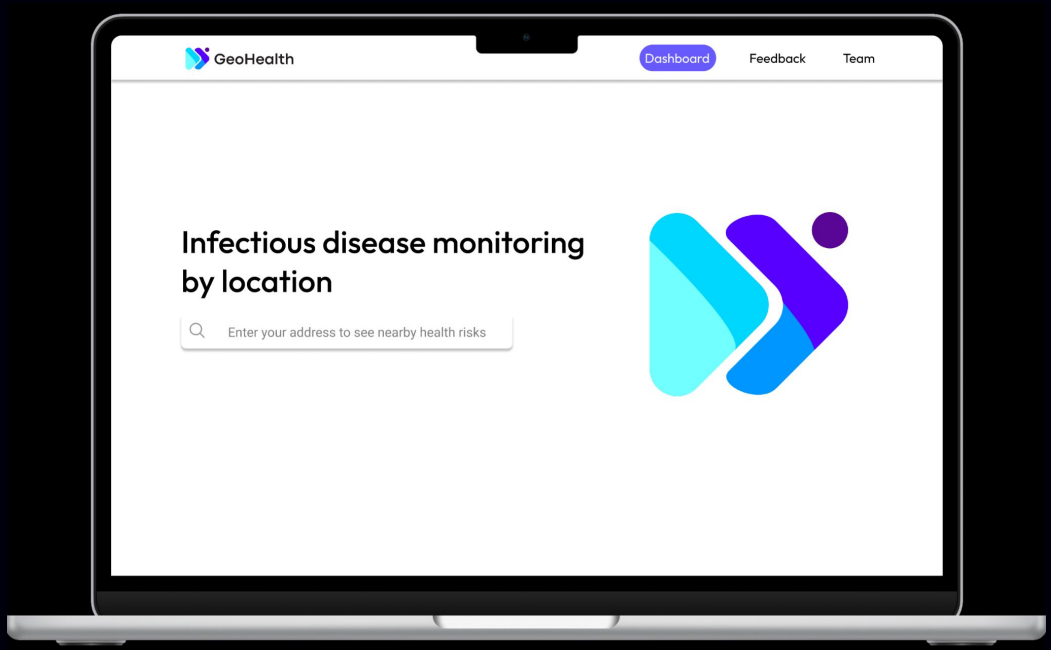
Solution approach and key features

Informative disease risk platform: with location based data and features

Wastewater data: GeoHealth's data will primarily be pulled from wastewater monitoring



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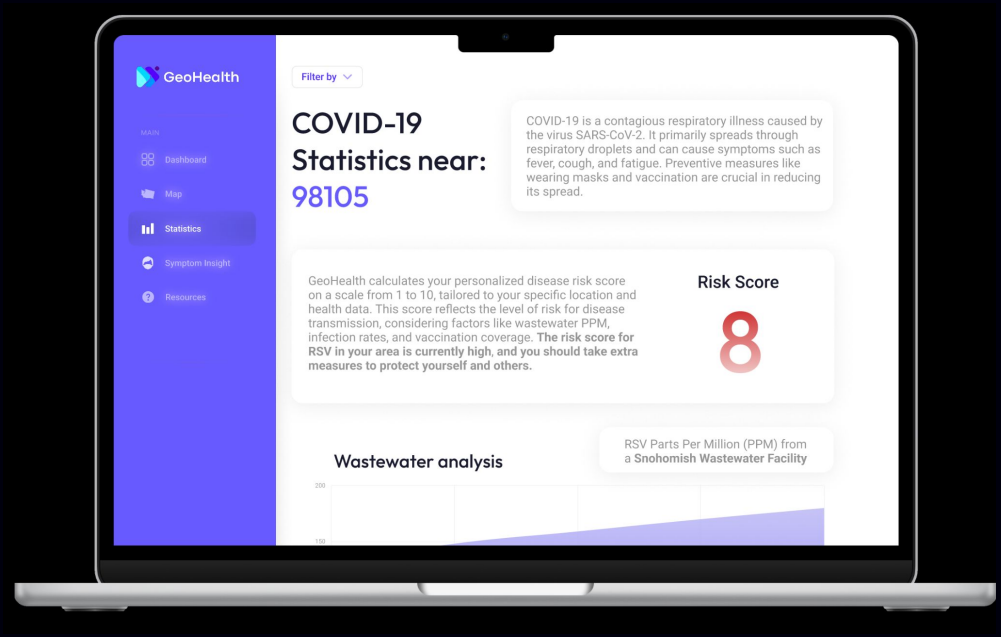
Solution approach and key features



Comprehensive Statistics Page

With key terms explained in plain language

Digestible Risk Assessment

Numeric risk score from 1-10 considering important public health metrics

Simple public health dashboard

Aimed to be intuitive, informative, and understandable to anyone.

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Product Demo

https://youtu.be/mmQGcSwRxxQ

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Ethical Considerations

Values & Missions

Commitment to enhancing health literacy and empowering informed health decisions.

Transparency

Our project is open sourced with transparent risk calculation algorithms and detailed documentations.

Privacy

CDC Wastewater data are anonymized and not traceable to individuals, ensuring privacy.

User Empowerment

Easily accessible data help people to make informed decisions on this ongoing COVID endemic.

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Next Steps Beyond Capstone

Open sourced via GitHub

- Any team can fork and modify their own instance of the service
- We will provide instructions on how to modify and migrate the website and APIs.
- We will provide detailed API and algorithm documentations

Maintained and available until Dec 31, 2024

- Data will be updated from CDC automatically until the deadline
- Webpage and API services will be publicly accessible at geohealth.chiptang.com until the deadline.
- Webpage will be available after the deadline, but data will stop be updated

Project Contents

Here's what you'll find within our project:

1. A landing page which prompts users to enter in their zip code, and takes them to the dashboard once zip code is entered.
2. A header navigation bar that includes a dashboard, feedback, about us, and API page.
3. Our dashboard includes a risk score, interactive map, trends, and resources page to help users understand their health risks and how to minimize the effect these health risks have.
4. The risk score is calculated by an algorithm taking in recent covid data from that zip code.
5. The interactive map displays wastewater treatment facility locations.
6. Our trends page goes more into depth regarding the Covid data and also has interactive graphs for the user to better visualize Covid data.
7. The feedback page allows users to enter in their feedback and this data to be stored within the backend of our project.
8. Our about us page describes the team members, their roles, and more information about our team and what we set out to accomplish.

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