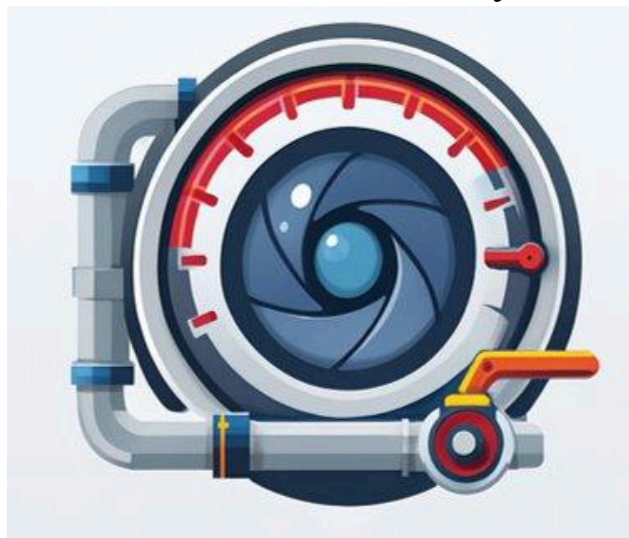# Sewer Viewer

Team: Hackstreet Boys

Sewer Viewer is like a high-tech control room for a city's underground waterways, but all on your browser! At its core, it's a React-based web app that constantly watches a network of virtual sewer cameras. Every five seconds, it pulls in fresh simulated data, so it feels like the cameras are live. The app has two main ways to see what's going on: a clean, sortable table that lists every camera's status and a map view that shows their positions. You can quickly spot trouble spots thanks to color-coded status indicators and alert icons that pop up when water levels go too high or too low.

The magic behind the scenes comes from a clever simulation engine. Without a real backend, the app still models how water flows through a mini sewer network, calculating levels based on grid coordinates and time delays. It also simulates ambient light around each camera, so darker areas show up in the UI. This data is pulled into React using a custom hook, useCameraData which keeps everything fresh and reactive. The table isn't just a spreadsheet; it's interactive, sortable, and even visually shows water levels using animated waves inside circular gauges.

Finally, the app is dressed to impress. A slide-out hamburger menu makes navigation a breeze, and a dark/light mode toggle lets you choose the vibe, with your choice remembered between sessions. Behind the scenes, clever CSS and SVG animations bring water and light to life, making the dashboard lively. Even though it's all simulated, the app tells a story: you can see exactly how the sewer network behaves, spot potential issues instantly, and enjoy a slick, modern UI while doing it. It's functional and fun!
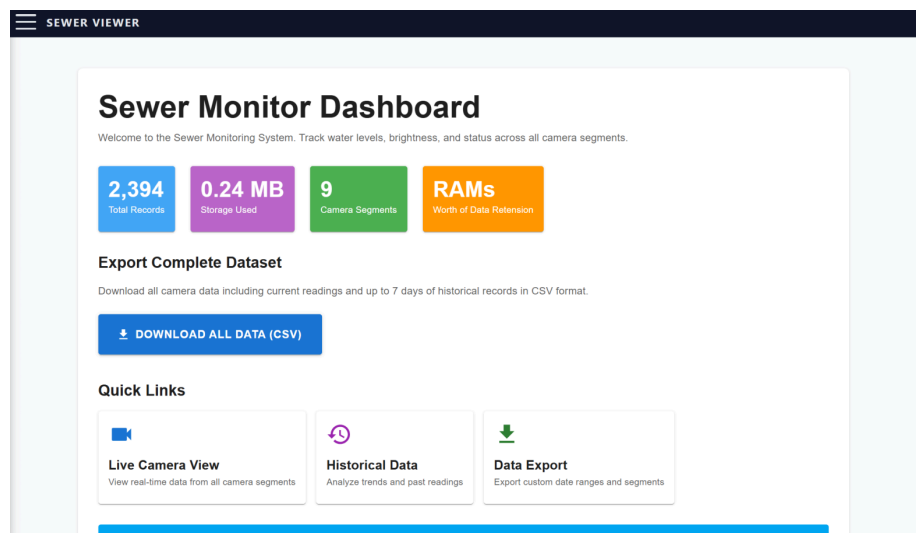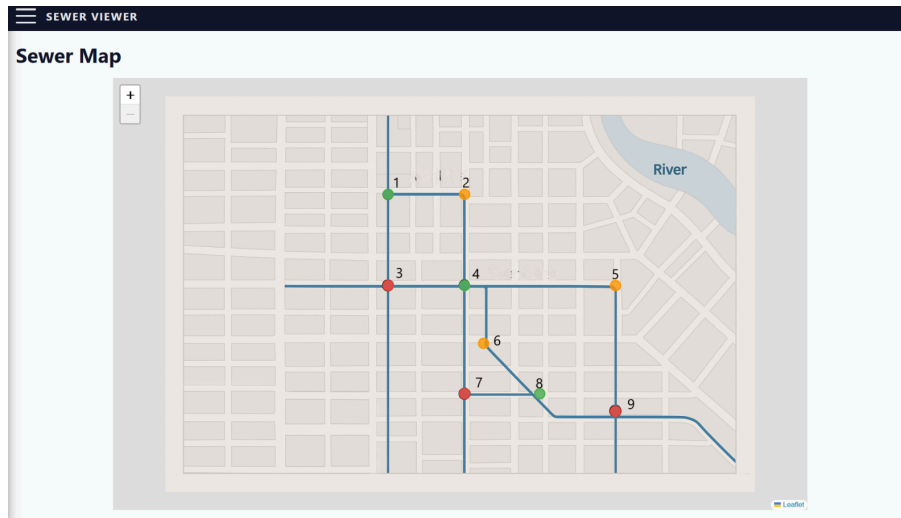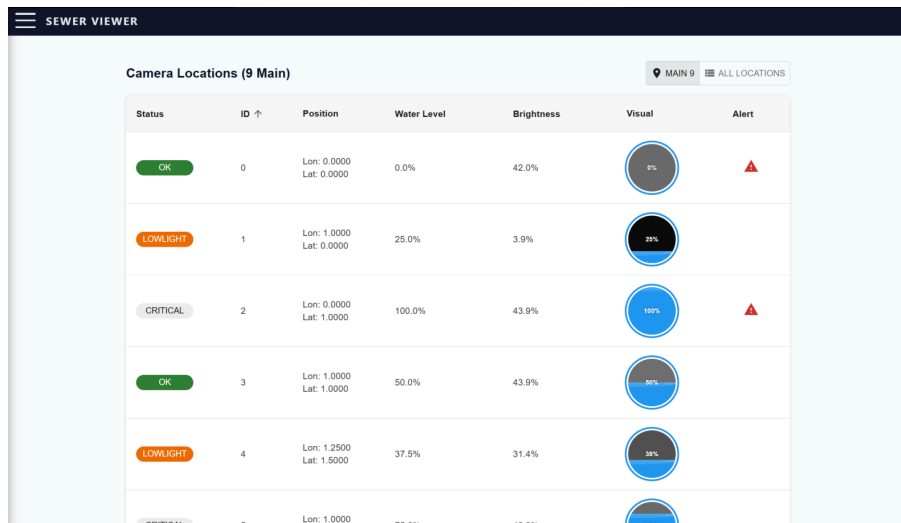

Figure 1: Sewer Monitor Home Page

Figure 2: Real-Time Data of Sewer Map

Figure 3: Health Representations of Sewer Systems.