

DRUM Web App

June 8, 2025 • vajiramandravi.com



DRUM Web App Latest News

Recently, IIT Kharagpur associate professor and students created the Dynamic Route Planning for Urban Green Mobility (or DRUM) web app.

About DRUM Web App

- It's like Google Maps but with the added feature of allowing **users pick routes based on air quality and energy efficiency.**
- It gives users **five route options**: shortest, fastest, least exposure to air pollution (LEAP), least energy consumption route (LECR), and a combination of all four factors called the **suggested route.**
- It was designed **to fetch live pollution and traffic** data the moment a user entered a route instead of pulling data at intervals.
- It **determines routes using GraphHopper**, a Java-based routing library that generates multiple options, while fetching real-time traffic updates from Mapbox.
- The team relied on data from the **CPCB and the World Air Quality Index.**

- They implemented a **segment-wise interpolation strategy** to estimate pollution levels in areas without direct sensor coverage, divided routes into segments, and used nearby sensor data to estimate pollution where coverage was missing.
- To test the system, the team simulated **Delhi's East, South, North, and Central corridors**, accounting for different traffic, road quality, and pollution patterns.
- The results showed that **shorter or faster routes often passed through polluted zones**, offsetting time or distance gains.

DRUM Web App FAQs

Q1: What is the meaning of green mobility?

Ans: Green transportation or green mobility is the movement of people and goods in any energy-efficient transportation mode with a low environmental effect.

Q2: What does the Central Pollution Control Board do?

Ans: It is responsible for maintaining national standards under a variety of environmental laws, in consultation with regional directorates, tribal, and local governments.

Source: TH

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