

Beyond the Fastest Route: Can We Make Our Journeys Healthier?

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When we open a navigation app, one of the first questions we ask is, “What is the fastest way to get there?” But the shortest may not always be the ‘best’ route. What makes a route ‘best’ can vary depending upon the need, choice, context and socio-economic conditions.

In most cases, however, our focus is on reaching the destination in the shortest possible time or by the shortest available route, irrespective of where we are heading towards – be it a school, hospital, market, office, place of worship or any other destination. However, the shortest route may not offer best travel experience every time. It may take us through heavily congested roads or areas with deteriorated air quality, whereas a slightly longer route may provide comparatively better environmental conditions. Thus, the route that appears best in terms of distance or travel time may not necessarily be the best choice from an environmental or health perspective. For people, who travel through the same road every day, these nuances can become increasingly important.

Conventional navigation applications, such as Google Maps, have transformed the way we travel. They help us find routes, estimate travel time and identify traffic conditions, making daily journeys more convenient. However, they primarily help us reach our destination efficiently. **Healthy Route takes a different perspective by asking whether the route can also be assessed from a health and environmental point of view.**

This idea led to the development of “**Healthy Route: Health-Aware Routing Beyond the Fastest Path**”, a health-aware navigation application that considers factors beyond travel time. The app brings together air quality, traffic conditions and user-related health considerations to help users compare alternative routes.

Google Map Vs HEALTHY ROUTE



Figure. (A) Google Maps and (B) Healthy Route. While conventional navigation focuses on route and travel information, Healthy Route additionally presents routes from a health and environmental perspective.

Bringing Health to Navigation

The central idea behind Healthy Route is to bring environmental and health parameters into everyday route planning. At the basic level, the system incorporates air quality and traffic conditions while evaluating “healthiness” of different routes. Air quality is represented here in terms of Air Quality Index (AQI), which provides an easy way of understanding the overall quality of air.

Traffic conditions add another important dimension, as the experience of travelling through a heavily congested road can differ considerably from that of travelling along a relatively free-flowing route.

In its advanced version, the app offers more personalized approach to route assessment. Instead of treating every traveller in same category, the system can consider user-related information.

A route is also an exposure pathway

Human beings are exposed to air pollution not only through the places where they live or work, but also while travelling through a city. For many people travelling through a city can also constitute a significant part of their daily environmental exposure. Two people travelling between the same locations may experience different conditions depending on the roads they choose. A route through a heavily congested corridor may provide a very different environment from a route through less congested areas. For someone who makes the same journey regularly, these differences can become an important part of their everyday travel experience.

From an idea to a working prototype

Developing Healthy Route involved bringing together the ideas of mobility, environmental conditions and health. The project began with a simple question about conventional navigation: *what if reaching a destination quickly was not the only consideration when choosing a route?*

This led to exploring how information about the conditions experienced during a journey could be incorporated into everyday route planning. The project progressed from this initial idea to a working prototype that brings these different aspects together. One of the challenges was to make this information meaningful and easy to understand way for everyday travellers. Rather than presenting users with complex environmental or health-related information, the app translates these considerations into simple route choices that can be compared.

Towards healthier urban mobility

Healthy Route represents an early step towards a broader vision of health-aware urban mobility. Future development could make the system increasingly responsive to changing environmental and traffic conditions while offering more personalised route assessments. As cities become more crowded and travel patterns become increasingly complex, such approaches could help people consider factors beyond distance and travel time when planning their daily journeys. Perhaps the question we ask our navigation systems in the future will not be only “How fast can I get there?”, but also “What kind of journey will I have along the way?”

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