TEAM MANGO MEDIA

Mobile app case study

CYCLE AI

A cycling route planner built around speed, safety and the rider's choice.

Flutter · Dart · GetX



CYCLE AI

Cycle AI: an AI-powered cycling route planner

Case study by Team Mango Media: a mobile app that balances speed and safety for urban cyclists.

Cycle AI brings route intelligence, hazard awareness and real-time bike station availability into one mobile experience. Riders can choose the safest, fastest or balanced route, then follow AI guidance on their journey.

The challenge · The product · The build · The results

THE CHALLENGE



PROJECT AT A GLANCE

AI-powered mobile platform

2 developers
1 project manager

Flutter, Dart, GetX

Urban cyclists have to trade speed for safety

The quickest route is not always the route a cyclist feels comfortable taking.

Fast routes tend to be unsafe, while safer alternatives take longer. That trade-off becomes harder to judge when the route planner does not show the hazards along the way.

THREE GAPS IN THE JOURNEY

Speed versus safety

Riders need a way to choose between getting there quickly and taking a safer route, rather than treating travel time as the only priority.

Hazards out of view

Without visibility into hazard zones, the route can look straightforward on a map while leaving important riding risks hidden.

Uncertain bike availability

Without real-time bike station data, riders cannot see availability as part of planning their trip.

THE SOLUTION

Route intelligence, street awareness and bike availability in one companion.



Designed for urban cycling.

An intelligent cycling companion

Cycle AI connects the route decision with the information riders need along the way.

The mobile platform combines AI route intelligence with live safety overlays, a real-time station finder and adaptive smart maps. Each capability addresses a different uncertainty in the cycling journey.

SEE THE SAFETY CONTEXT

AI route intelligence works alongside live safety overlays, bringing hazard awareness into the same experience as route planning.

Safety information becomes part of understanding a route, rather than something separated from the journey.

FIND AN AVAILABLE BIKE

The real-time bike station finder shows availability, helping riders include station information in their trip planning.

USE MAPS THAT ADAPT

Adaptive smart maps offer day and night modes, supporting the rider's view of the journey in either setting.

RIDER EXPERIENCE



Choose the route.
Stay aware.
Follow guidance.

Bike and walking connections within the same journey.

Features built around the rider

Control before departure. Awareness and guidance during the ride.

Cycle AI's feature set brings route choice, risk information and navigation together, with multi-modal routing for journeys that combine cycling and walking.

Safest, fastest or balanced AI routing

Riders choose the priority that fits their trip. The route decision can favour safety, speed or a balance between the two.

Hazard awareness

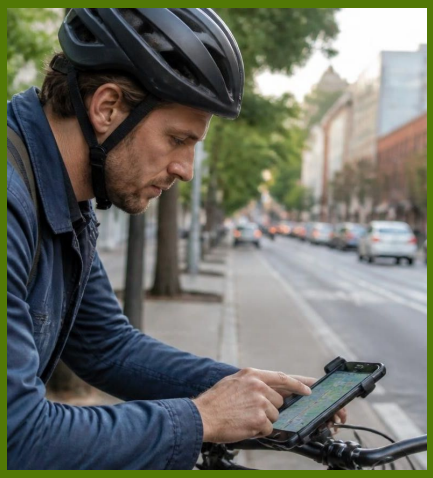
Verified reporting and risk scoring support hazard awareness, adding safety context to the route rather than relying on distance and travel time alone.

Hands-free voice navigation

Voice guidance carries directions into the ride, providing a hands-free way to follow the planned journey.

Multi-modal routing

Bike and walking segments can be combined in one route, reflecting a journey that may not stay on the bicycle from start to finish.



THE RIDER JOURNEY

3

steps from destination to ride

Destination

Route preference

AI guidance

The rider sets the priority. Cycle AI provides the route and guidance.

Three steps from destination to ride

A direct path from deciding where to go to following the route.

The interaction centres on a destination and a route preference. Riders choose how to balance safety and speed before setting off with AI guidance.

01

Enter a destination

Start with where the journey needs to end. The destination gives Cycle AI the starting point for planning the ride.

02

Choose a route type: safest, fastest or balanced

Make the trip's priority explicit. Choose the safest option, favour speed or select a balanced route that considers both.

The choice keeps the rider's preference at the centre of route planning.

03

Ride with AI guidance

Follow the selected route with AI guidance. Hands-free voice navigation supports directions during the ride, while the app brings safety information into the journey.

THE BUILD

2

developers

1

project manager



Mobile · Web · AI

Built with Flutter, Dart and custom algorithms

A mobile-led platform with a defined web stack and custom AI algorithms.

Cycle AI's technology spans the rider-facing mobile app, web development and route intelligence. The project team comprised 2 developers and 1 project manager.

TECHNOLOGY RECORD

MOBILE

Flutter, Dart, GetX and SDKs

The mobile stack underpins the cycling companion: route selection, smart maps, bike station information and guidance within the app.

WEB

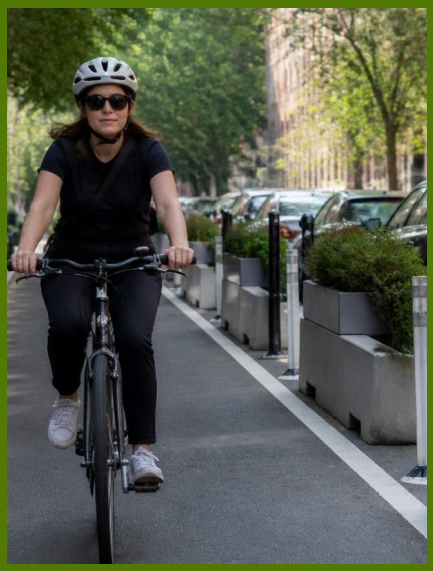
Vue.js

Vue.js is the web technology listed for the platform, alongside the Flutter and Dart mobile stack.

AI

Custom algorithms

Custom algorithms provide the AI component of the product. Route intelligence and hazard avoidance sit at the centre of the cycling use case.



REPORTED OUTCOMES

3,200+

reported hazards avoided

AI hazard avoidance

Route computing

Bike station accuracy

Source: Team Mango Media's Cycle AI case study.

Measured results

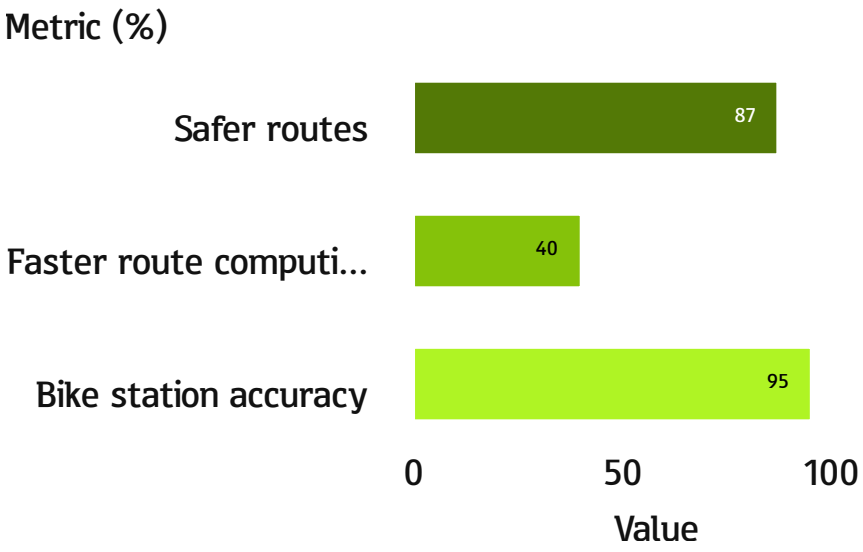
Cycle AI delivers safer, faster, more accurate riding.

The reported results cover route safety, computing speed and bike station accuracy. A separate count records the reported hazards avoided.

87%
safer routes through AI hazard avoidance

40%
faster route computing

95%
bike station accuracy

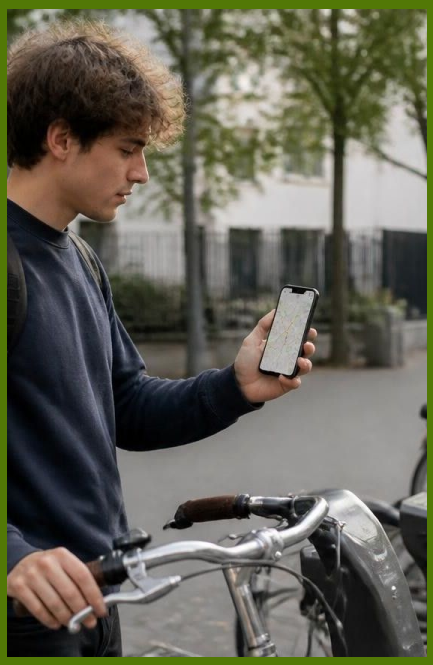


Cycle AI results. Values are percentages; the measures describe different outcomes.

WHAT THE RESULTS DESCRIBE

87% safer routes through AI hazard avoidance addresses the product's central safety challenge. **40% faster route computing** describes the route-planning performance result.

95% bike station accuracy speaks to station information, while **3,200+ reported hazards avoided** captures hazard avoidance as a count rather than a percentage.



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Cycle AI

AI-powered cycling route planner

NEXT CONVERSATION

Your mobile app idea.

START WITH THE PRODUCT

Have a mobile app in mind?

Talk to Team Mango Media about your next product.

Cycle AI brings together a specific rider problem, a mobile experience and custom route intelligence. The case centres on a clear choice: how to balance speed and safety for urban cyclists.

BRING THE PROBLEM YOU WANT TO SOLVE

For a first conversation, describe who the app is for, what they are trying to do and where the current experience falls short.

Which decision should the product make easier? What information would help users act? What outcome would make the project worth building?

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