



DigiEduHack Solution

ECF Hackathon - Building the cycling city of the future

Challenge: ECF Hackathon - Building the cycling city of the future Challenge 2020

ORBIS- BE THE CHANGE(MAKING CYCLE RIDING SAFE, PRODUCTIVE & FUN)

Using Machine Learning to find in-demand non-existing cycle

Extensive research showed problems in riding - Safety, Productivity, and Fun. Unavailability of in-demand cycle path force rider to take roads and long routes make riding less safer and non-productive. 50% of people in Europe prefer cars as a result of this. People feel riding cars is more fun

Team: ORBIS - BE THE CHANGE

Team members

1. GRATUS IRUTHAYA KISHO ARUL RAYAPPAN 2. JAYANTH RAJASEKHARAN 3. RASIN RASHEED

Members roles and background

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Android and IoT Developer | Freelance worker

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Solution Details

Solution description

Developing an adequate network of Cycle Paths is a crucial step to favor the shift towards Cycle mobility.

Our idea is to use Machine Learning algorithm to analyze data (Global Navigation Satellite System traces) collected from a smartphone through a mobile application. This analysis will give info about the mode of transport and route most frequented by bikers which are not equipped with cycle paths.

Data on In-demand non-existing Cycle path would be shared with public authorities for development and with riders.

Orbis app will be equipped with game-oriented features to make the riding fun.

our RIDE & EARN feature is the disruptive idea to change the way of advertisement. Advertisement through which will help the riders earn for every mile they ride

Solution context

From 2010, the reduction in the percentage of cycle accidents is 0%. 50% of people feel the riding cycle is not safe.

The first problem we want to solve `SAFETY of CYCLE riders. Our idea is to find the in-demand non-existing cycle paths which have to be developed to make cycle riding safer and faster using Machine learning

Secondly, we want to make cycle riding more productive. People feel riding takes a long time and not productive. Laying in-demand cycle routes will make cycle riding faster

The disruptive idea of marketing through the cycle will pay the riders to earn for every mile they ride making its productive.

Finally, we want to make cycling more fun. Orbis- the game-oriented feature will nudge people to ride and share achievement in social media to promote further

Solution target group

Our target group.

1. people using a car for urban mobility (more than 50% of the population)
2. Public transport even for short trips (take more time due to busy schedule and their routes)
3. People who are using cycle only for leisure

With well-connected cycle paths, cycle riding will become SAFER and PRODUCTIVE making car users, leisure riders, and public transport users to shift to cycle riding as the main mode of transport.

RIDE & EARN feature will pay for every mile they ride and further nudge them. Game oriented feature linked with social network platforms will give the sense of pride and attention sought

Our analysis will help the government to optimally plan smart cities

Solution impact

Our solution will improve the cycle riders exponentially supported by the unique feature of ORBIS-App.

DATA acquired from ORBIS and analyzed using the Machine learning algorithm will help in improving city planning and makes life easier for everyone with added health benefits.

The development of an in-demand cycle path will reduce accidents and increase no of riders thereby reducing pollution.

In the period of time data acquired from the ORBIS application is processed by our MACHINE-LEARNING algorithms, we can find the number of cycle paths developed, an increase of riders, and the number of people migrated from other modes of transport to bicycle

Comparison of this data with pollution levels will give its impact on reducing pollution.

Solution tweet text

#Orbis#be the change#SAFE,PRODUCTIVE,FUN#finding in-demand non-existing cycle paths to be developed to make cycle riding safe& productive. Game-oriented & FUN loaded features.Whats stooping you download ORBIS, get on cycle and ride for a better tomorrow

Solution innovativeness

The idea of finding the non-existing in-demand cycle paths is novel and no solution like this is available in the market.

Everyone is working to encourage people to ride cycles but the ultimate question is where will the riders ride?

Unless dedicated cycle paths are developed, people will not feel SAFE.

Orbis will make this happen and other features will help people have fun and earn

Solution transferability

Orbis with little modification can be used for regulating the traffic of cars and public transports, which will reduce pollution

Our Machine Learning Algorithm is done in a modular platform which used for other means of transport and is scalable

Solution sustainability

The first step is the development of the ORBIS application and backend Machine Learning algorithm.

then ORBIS will be promoted with existing riders through Community events ECF, collaboration with cycle manufacturers, and fitness shops like Decathlon. The next step will be promoting our app through existing users with CYCLE marketing campaigns

Mid-term we are expecting the leisure riders to use Cycle as the Main mode of transport and with more cycle paths considerable increase in migration of people who are using cars to office and groceries

Long term, knowledge can be used for the conversion of cities to **10 Minute City**, where everything is accessible by cycle or walk

Solution team work

Our team had mixed expertise and complimented better for this solution development.

Jayanth - business analyst and market research

`Gratus- IOT, Data science, front-end

Rasin - Web-developer, UX design

We are happy that we met each other in this hackathon and planning to develop this further

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