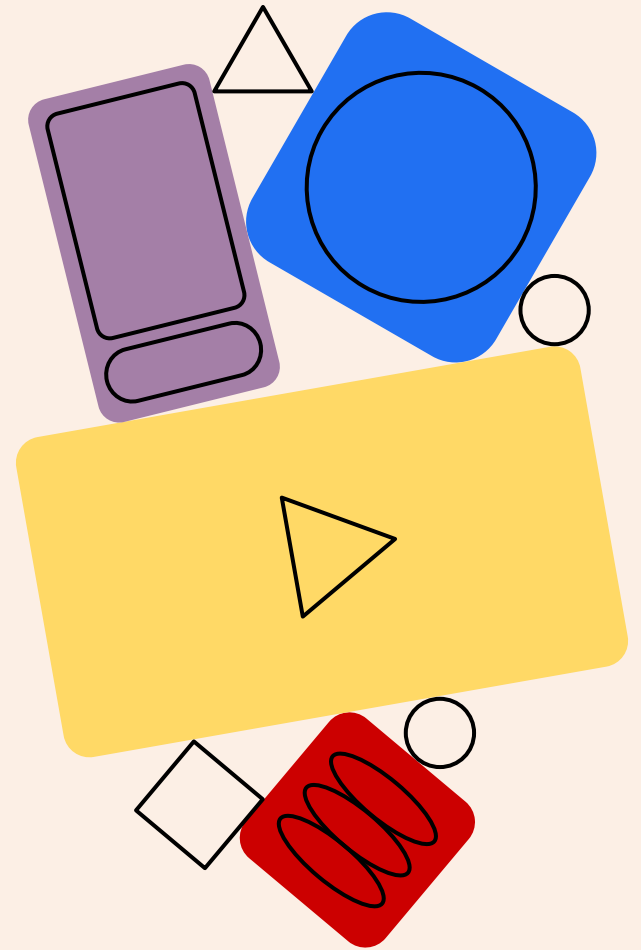


A Business idea for  
Netcompany  
Hackathon 2025

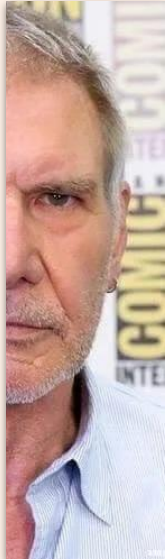
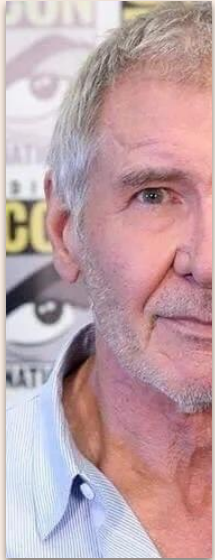
# Parkathon

'Cause finding to park can be a sprint and not a marathon



# The Problem

PARKING SPOT      TRASH CAN



Parkathon is a web application that aims to reduce parking congestion in Thessaloniki, with the potential to expand to other densely populated cities.

- Locates nearby parking spots to your destination
- Utilizes historic data from a database
- Predicts their probability of being free

Finding a parking slot in Thessaloniki is a hassle. Failing to park in a timely manner leads to:

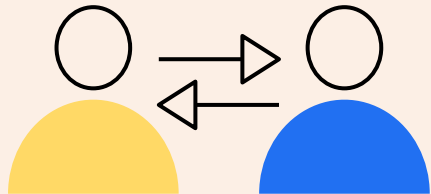
- Fuel Consumption
- Time Waste
- Increased Traffic
- Anger and frustration



# Proposed Solution

Parkathon offers an asynchronous communication method for cars by means of a database and machine learning.

Thinking of a parking spot as a resource, the aim is to maximize utilization.

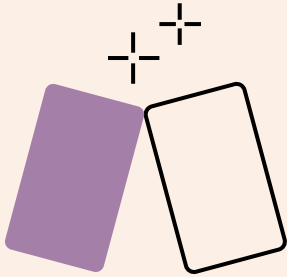


Users asynchronously communicate via a database.  
Having data is better than arbitrarily searching!

$$\text{USAGE} = \frac{\text{TOTAL TIME} - \text{EMPTY TIME}}{\text{TOTAL TIME}}$$

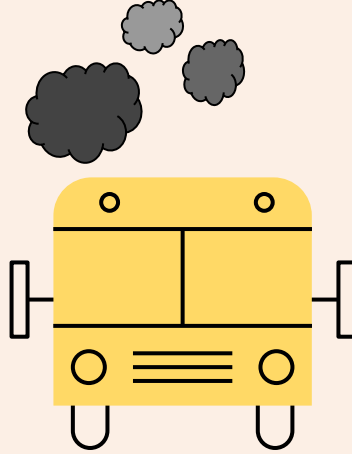
Every time frame parking spot remains untapped parking congestion worsens, as it means more cars are on the road!

# Features & Perks



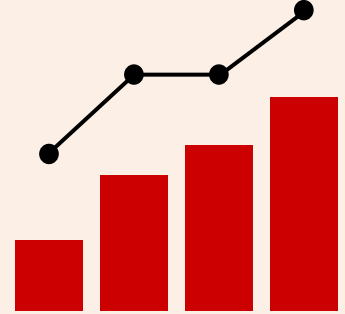
## Ease of Use

Intuitive UI, no expertise required



## Traffic Alleviation

Less time on the road equals less fuel consumption and less emotional distress

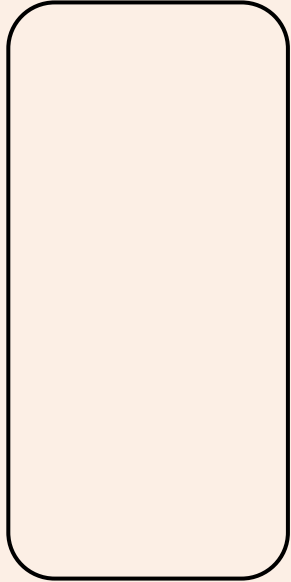


## Statistics

Increased parking rates, decreased searching time

# View on different devices

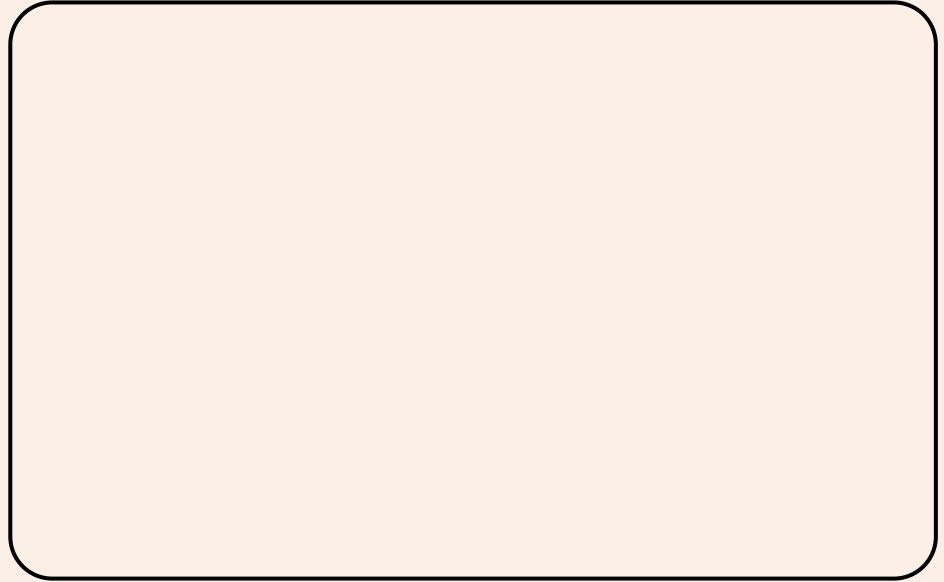
Phone



Tablet



Desktop





# How to use


First, the user logs in.

User privacy and security are ensured by securely *hashing* passwords and protecting session cookies through secure *tokens*.

## Sign Up

 Name


 Email


 Password

Sign Up

Log In

## Login

 Email

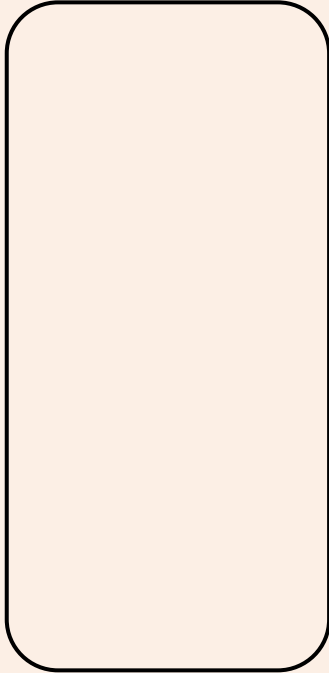
 Password

Sign Up

Log In

### Step 1

Set your destination.



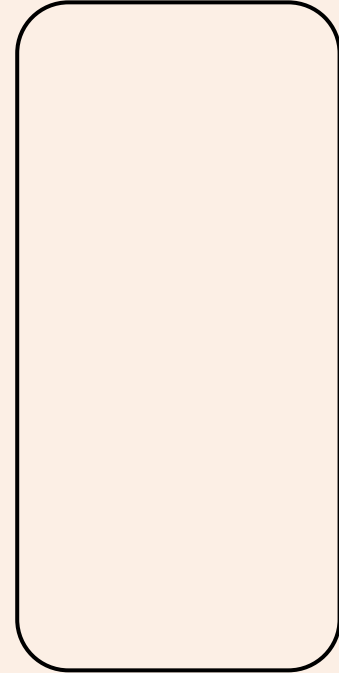
### Step 2

Receive parking  
recommendations.

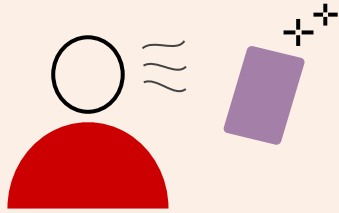


### Step 3

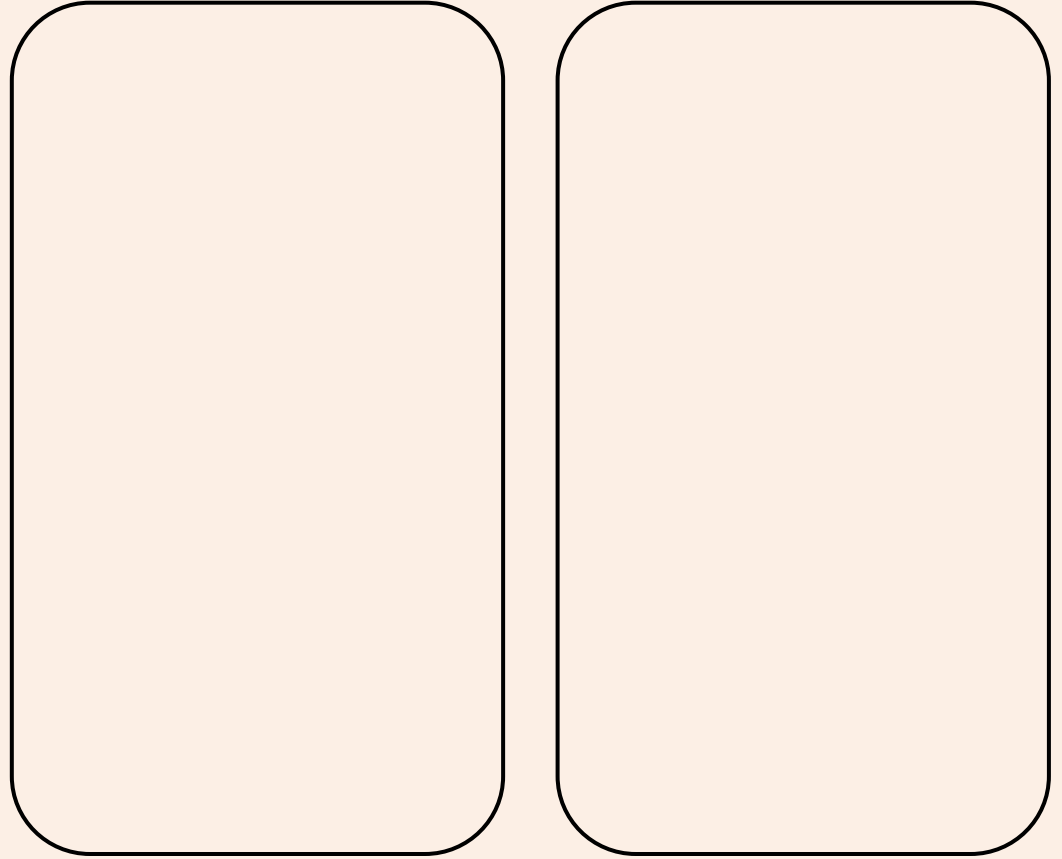
Park and let the app know!



# Safety



Use voice  
commands to set  
your destination to  
ensure safety while  
driving!





# Monetization

## Business model/ Potential Clients

### **Automobile Industries:**

An attractive feature that lines up with the eminent shift to the electric car.

### **The State:**

Municipalities that wish to better citizen quality of life and discourage parking lawlessness.

### **Individuals:**

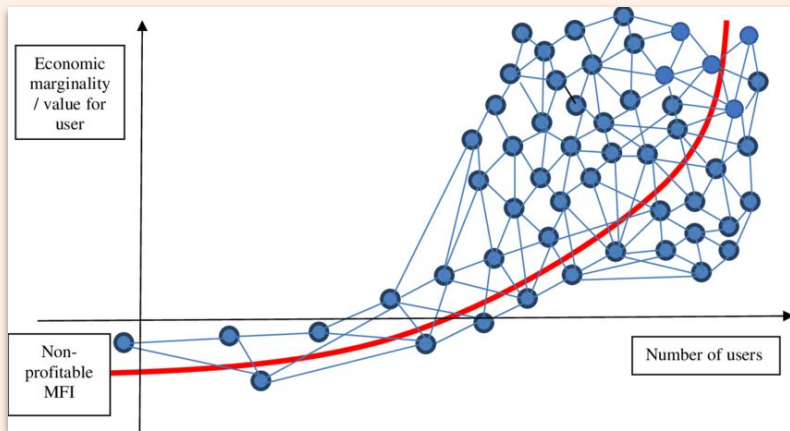
More economic than renting parking space or a spotify subscription to listen to music while searching for parking.

<https://www.youtube.com/watch?v=Og1hgVYs5zg>

## Cross-Sector Applicability

- **Private Sector:** Car manufacturers can integrate this app as an attractive feature to ease parking struggles.
- **Public Sector:** Reduced traffic congestion from fewer drivers searching for parking. Governments could subsidize the integration of such systems in vehicles to improve traffic flow, minimize road wear and reduce noise pollution.
- **Individual:** Lower fuel consumption (eco-friendly!), time savings and reduced stress from parking difficulties.

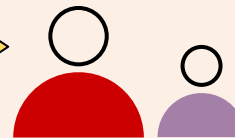
# Scaling & Expanding



**Metcalfe's law:** the financial value or influence of a network is proportional to the square of the number of connected users of the system ( $n^2$ )

- **Scale:** More users lead to more accurate data. More financially viable as it grows.
- **Expansion:** Successful implementation in Central Macedonia, could pave the way for global deployment –acting locally, thinking globally.
- **Automation:** Integrating the app with in-car systems (e.g. detecting engine shutdown) could eliminate the need for manual input.
- **Futureproof:** As electric vehicles become the norm, an embedded system will become even more viable. It would also work great with weight detector parking spots, for a modernized city.

This app finds you parking spots!

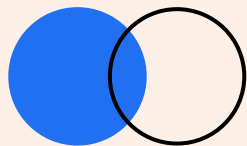


Awesome! I'll try it too!

# Recap



## Hitting “park”



The frontend makes a call to the backend with the user's destination and other data like the time, the weather etc.

## Predicting availability

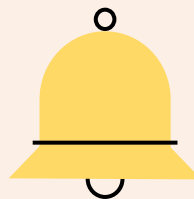


The app uses historic data to predict if this spot will be available given the time, the weather etc.



## Identifying candidate spots

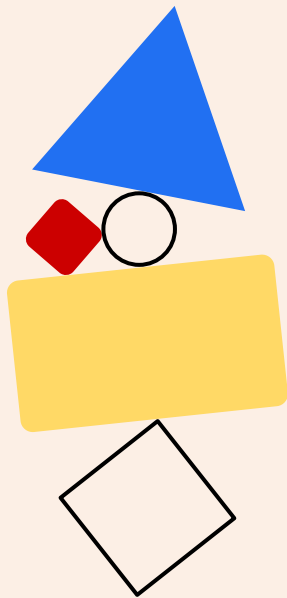
Given your current position, the app identifies nearby available parking spots.



## Output

Color coded pins pop up on the map for representing nearby spots and their availability (green high chance, red low chance)

# FAQ & Troubleshooting



➤ Are the data real?

**Answer:** Yes, the data are real, but sparse, since this is a prototype and more time is needed to set an adequate database.

➤ Are the predictions accurate?

**Answer:** As the app grows and gains more users the database gets populated and the predictions become increasingly accurate.

➤ What if there are no nearby parking spots?

**Answer:** The user is prompted accordingly, there may be a need to compromise.

# Thanks for your attention!

## Developed By **Killswitch:**

- ★ Bakoulas Epameinondas
- ★ Bokis Dimitris
- ★ Charisi Maria
- ★ Michalainas Ioannis

## Sources:

- [https://www.typosthes.gr/thessaloniki/343740\\_thessaloniki-apisteyto-parkarisma-paratise-aytokinito-pa-no-se-parteri](https://www.typosthes.gr/thessaloniki/343740_thessaloniki-apisteyto-parkarisma-paratise-aytokinito-pa-no-se-parteri)
- [https://en.wikipedia.org/wiki/Metcalfe%27s\\_law](https://en.wikipedia.org/wiki/Metcalfe%27s_law)