

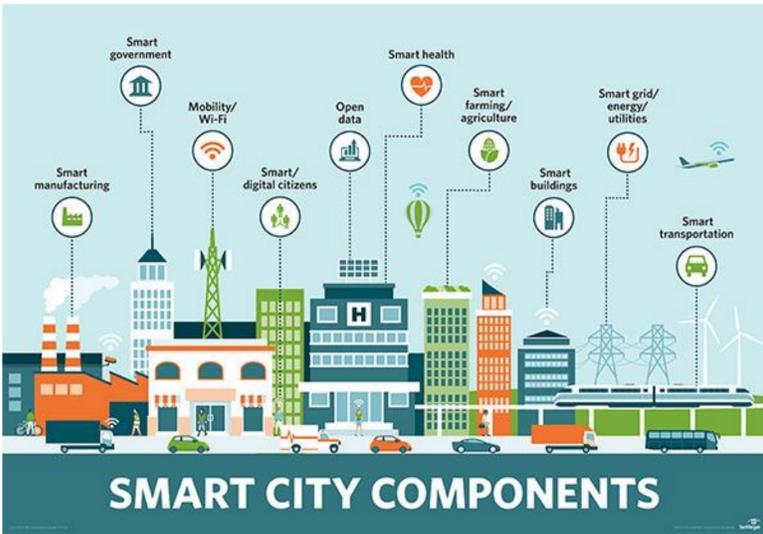
# Smart Parking as part of a Smart City

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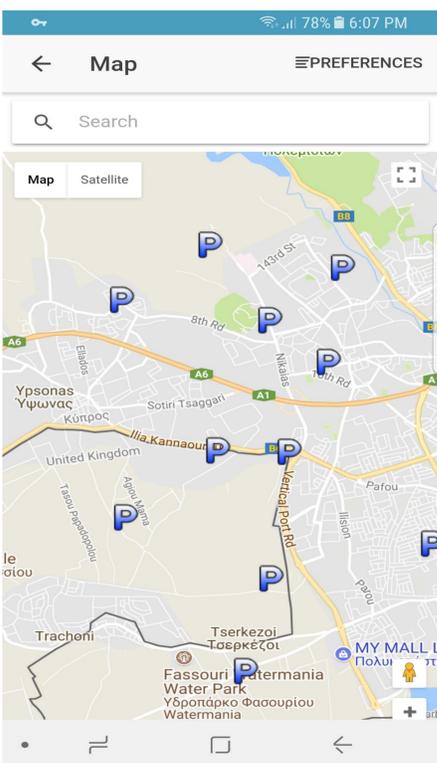
## Smart City

Smart city is the idea of a city that everything operates through the internet and with the help of interconnection of different devices. This amount of information taken for multiple devices will help to manage many of a city's assets like local departments' information systems, schools, libraries, transportation systems, hospitals, power plants, water supply networks, waste management, law enforcement, and other community services



## Smart Parking Mobile app

As part of a smart city i am developing a smart parking mobile application. The application will take some user personal preferences and it will present to the user the available parkings in a specific order starting from the best depending on his preferences. The application will take its data from my local API as well as external APIS. Our local API may take the specific places of a each parking through sensors installed at the parking



## Fuzzy logic algorithm

Fuzzy logic is a form of many-valued logic in which the truth values of variables may be any real number between 0 and 1. It is employed to handle the concept of partial truth where the truth value may range between completely true and completely false

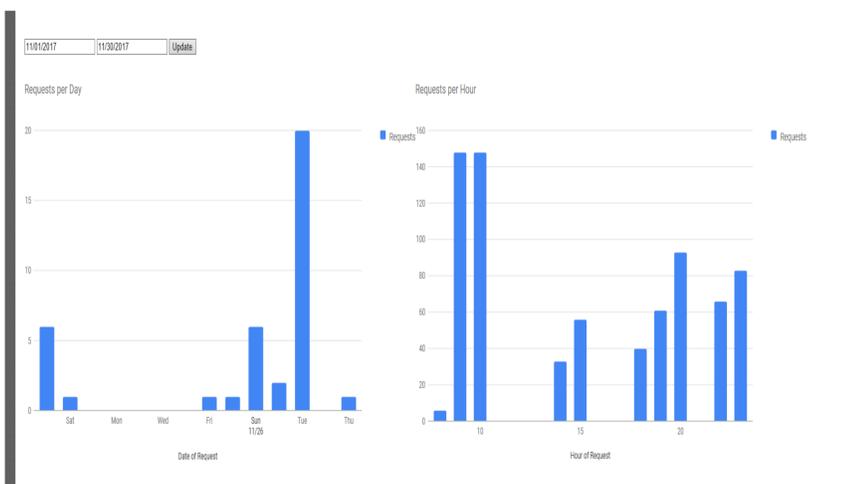
The user will give a specific priority in each of the preferences. Using that priority, a fuzzy logic algorithm is used that by normalizing those parameters will produced a score for each available parking. The parkings will be presented ordered by that score

The preferences the user will have to choose from may include:

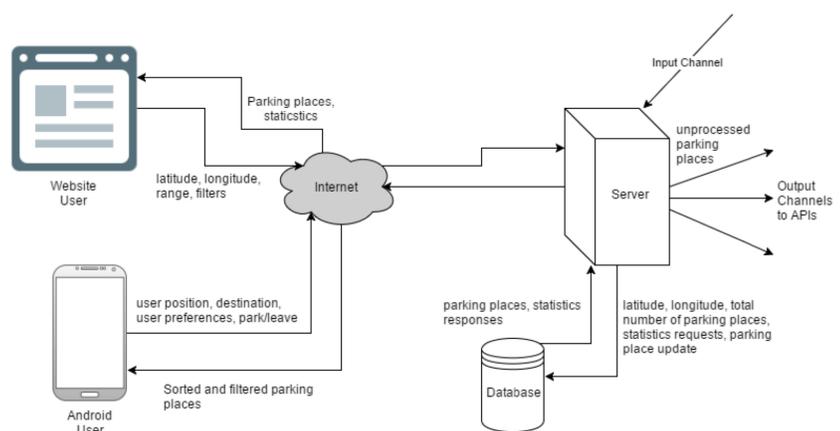
- Distance from user current location to parking
- Distance from parking to destination
- Price
- Most frequently used
- Traffic

## Smart Parking Website

A website is developed on which you can register log in as an administrator and put your own parkings at the database. The website can also provide statistics about requests made on our API in a specific date period



For the moment we only consider the user to indicate when he parks and when he leaves a parking but for the future we are interested in producing this information through installed sensors. Also we looking forward to expanding our database by including more external open APIS. Finally we always research for more preferences that can further customize the selection of parking for the user. Below you can see the overall structure of the system as it is now



## Conclusion

What I described is only a part of a smart city, if we take this example and develop the other assets of a city as well then we will have a city of the future where everything will be managed quickly and efficiently and it will be connected and well maintained