

Open Data

OpenParkingMadrid

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Overview

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Introduction

This presentation is about our OpenParkingMadrid project, an application that aims to show the availability of parking spaces in Madrid.



Introduction

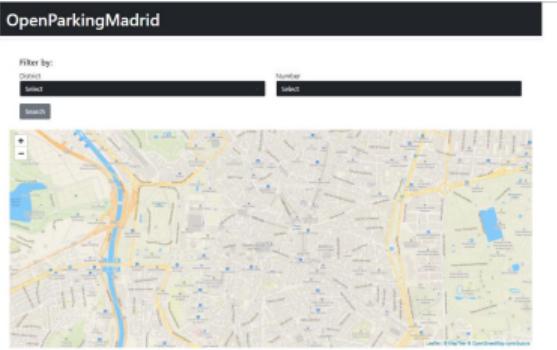


Figure: App Interface

In this project we are focused on performing this task with Linked Data. The most important features of the application are:

- ① Predicting the availability of a parking lot.
- ② Filter parking lots by ubication, total parking slots, etc.
- ③ View nearby parkings lots.

Introduction

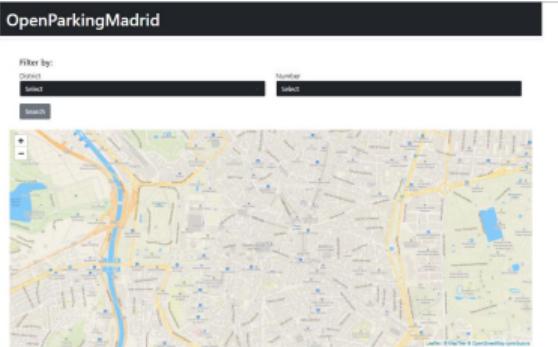


Figure: App Interface

In this project we are focused on performing this task with Linked Data. The most important features of the application are:

- ① Predicting the availability of a parking lot.

Note that the presentation of this project has the Linked Data part. This prediction part should be finished afterwards.

Datasets

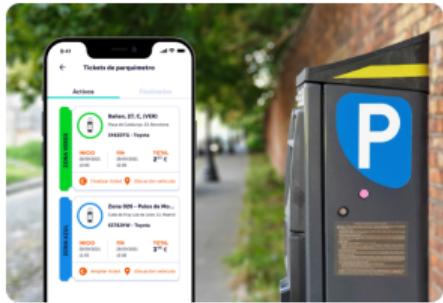
Initially, we found 3 datasets with information on **Parking Meters**, **Parking Tickets** and **Parking Lots**.



Location in coordinates and streets,
neighbourhood and district of each parking
meter.

Datasets

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Data on tickets issued via mobile and at parking meters since 2014.

Datasets

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Information about the street, neighborhood and district of each parking lot, their color and if the parking is in parallel or in angle.

Dataset

The **licence** of the chosen datasets given by **Madrid City Hall** allows us to generate applications for non-commercial and commercial use.



Ontology

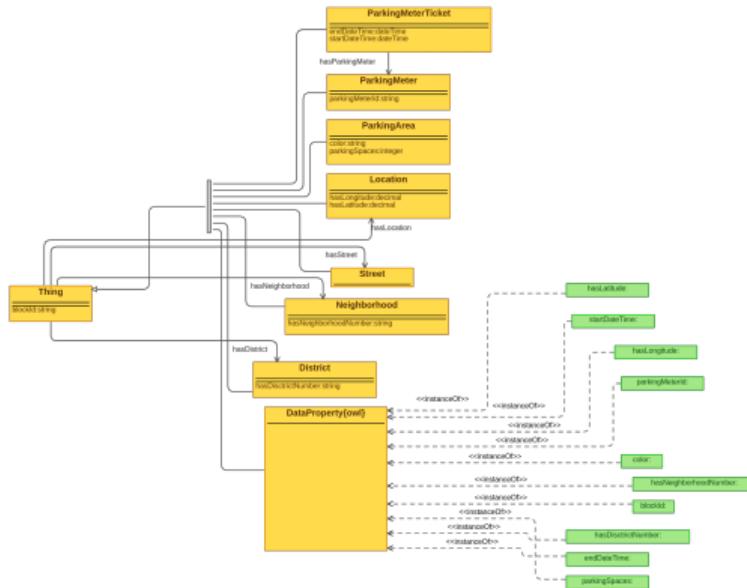


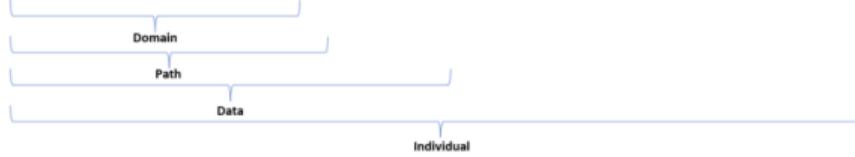
Figure: Ontology Graph

Ontology

`http://www.group10.org/pl/ontology/ParkingLotsMadrid#[className | propertyName]`



`http://www.group10.org/pl/resource/[className]/[individualIdentifier]`



Transformation and mapping

In order to simplify data linking, we create a dataset for each object we want to link. We also use the URI as the identifier of the objects in each new dataset.

Identificador	Nombre	barrio_wikidata	Código	distrito
http://www.group10.org/pl/resource/Neighborhood/N01-01	Palacio	https://wikidata.org/entity/Q2136510	01-01	http://www.group10.org/pl/resource/District/D01
http://www.group10.org/pl/resource/Neighborhood/N01-02	Embajadores	https://wikidata.org/entity/Q2449844	01-02	http://www.group10.org/pl/resource/District/D01
http://www.group10.org/pl/resource/Neighborhood/N01-03	Cortes	https://wikidata.org/entity/Q2535637	01-03	http://www.group10.org/pl/resource/District/D01
http://www.group10.org/pl/resource/Neighborhood/N01-04	Justicia	https://wikidata.org/entity/Q1992319	01-04	http://www.group10.org/pl/resource/District/D01
http://www.group10.org/pl/resource/Neighborhood/N01-05	Universidad	https://wikidata.org/entity/Q10387767	01-05	http://www.group10.org/pl/resource/District/D01
http://www.group10.org/pl/resource/Neighborhood/N01-06	Sol	https://wikidata.org/entity/Q2465181	01-06	http://www.group10.org/pl/resource/District/D01
http://www.group10.org/pl/resource/Neighborhood/N02-01	Imperial	https://wikidata.org/entity/Q3773740	02-01	http://www.group10.org/pl/resource/District/D02
http://www.group10.org/pl/resource/Neighborhood/N02-02	Las Acacias	https://wikidata.org/entity/Q3319190	02-02	http://www.group10.org/pl/resource/District/D02
http://www.group10.org/pl/resource/Neighborhood/N02-03	La Chopera	https://wikidata.org/entity/Q3773750	02-03	http://www.group10.org/pl/resource/District/D02
http://www.group10.org/pl/resource/Neighborhood/N02-04	Legazpi	https://wikidata.org/entity/Q3773990	02-04	http://www.group10.org/pl/resource/District/D02



```

mappings:
triplesmap1:
sources:
- [Barrio-with-links.csv~csv]
s: ${Identificador}
po:
- [a, vocab:Neighborhood]
- [rdfs:label, ${Nombre}]
- [vocab:hasNeighborhoodNumber, ${Codigo}]
- [vocab:hasDistrict, ${distrito}-iri]
- [owl:sameAs, ${barrio_wikidata}-iri]

```

Linked Data

To perform the data reconciliation, we took advantage of the transformation made in the datasets, joining Street, Neighbourhood and District with Wikidata.



Demo

