Analysis, design and implementation of a component for exchanging data with Ocean Protocol

Adrián Blázquez León

Thesis supervisor: Prof. Joaquín Luciano Salvachúa Rodríguez


NETWORK SLICING
Gigabytes
in a second
Industry
automation
Self Driving Car
HOTEL
eHealth
Voice
Work and play
in the cloud
Augmented reality
3D video, UHD screens
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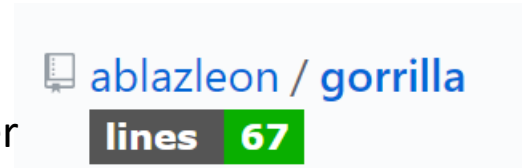
Analysis, design and implementation of component for data exchange with Ocean Protocol

Objectives:

1. **Analyze.** Why echange data, Ocean Protocol & a shop? (LabelPop)
2. **Design.**
3. **Implementation.**

From OceanProtocol/Commons

Flask base server



From stackabuse/welcome

Parking analyzer

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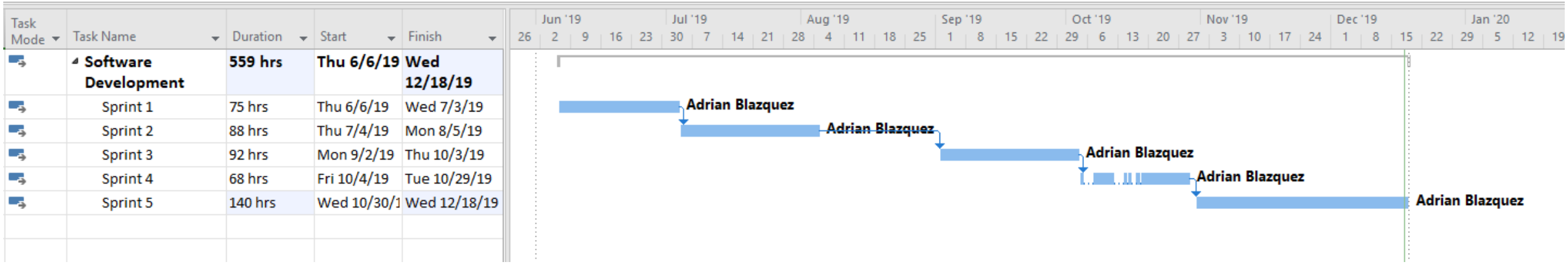
Analysis, design and implementation of component for data exchange with Ocean Protocol

- Sprint 1
- Sprint 2
- Sprint 3
- Sprint 4
- Sprint 5



Task Mode	Task Name	Duration	Start	Finish
	Software Development	**559 hrs**	**Thu 6/6/19**	**Wed 12/18/19**
	Sprint 1	75 hrs	Thu 6/6/19	Wed 7/3/19
	Sprint 2	88 hrs	Thu 7/4/19	Mon 8/5/19
	Sprint 3	92 hrs	Mon 9/2/19	Thu 10/3/19
	Sprint 4	68 hrs	Fri 10/4/19	Tue 10/29/19
	Sprint 5	140 hrs	Wed 10/30/1	Wed 12/18/19

Analysis, design and implementation of component for data exchange with Ocean Protocol

- **Sprint 1**
- Sprint 2
- Sprint 3
- Sprint 4
- Sprint 5

ablazleon / election_ethereum

lines 15553

ablazleon / Recommender

lines 544

Task Mode	Task Name	Duration	Start	Finish
	Software Development	**559 hrs**	**Thu 6/6/19**	**Wed 12/18/19**
	Sprint 1	75 hrs	Thu 6/6/19	Wed 7/3/19
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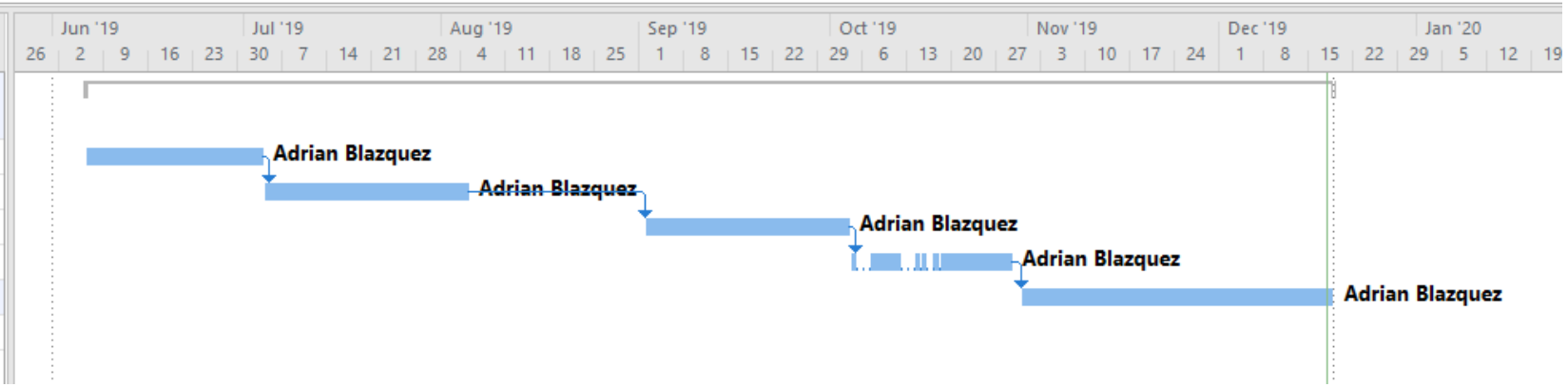
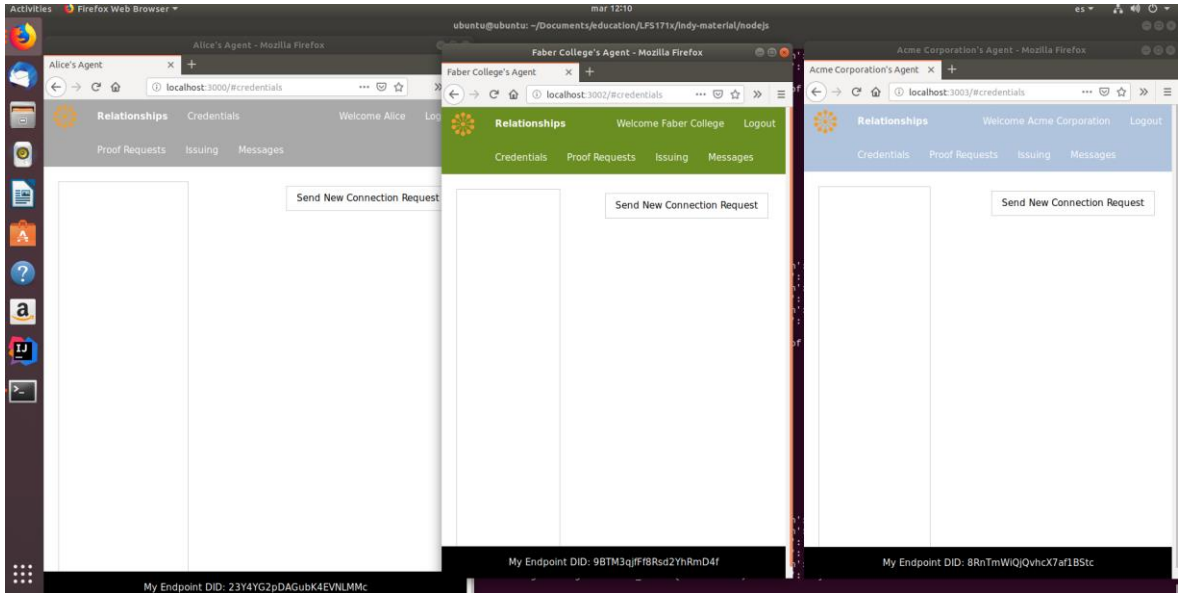
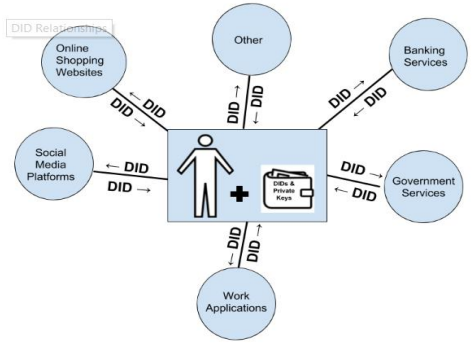
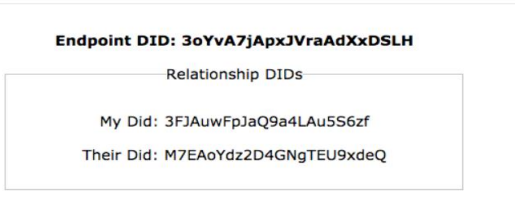


Analysis, design and implementation of component for data exchange with Ocean Protocol

- Sprint 1
- **Sprint 2**
- Sprint 3
- Sprint 4
- Sprint 5







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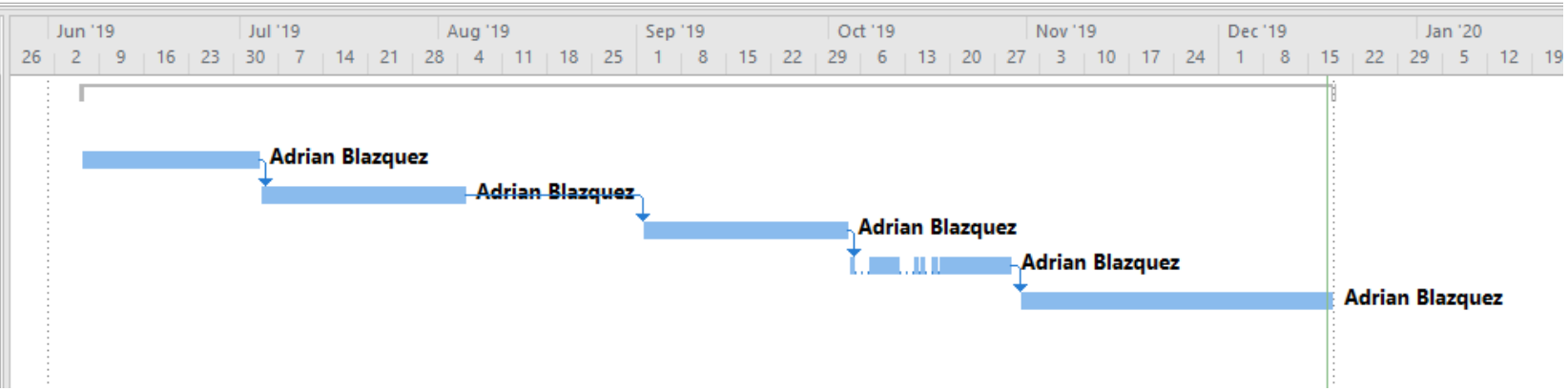
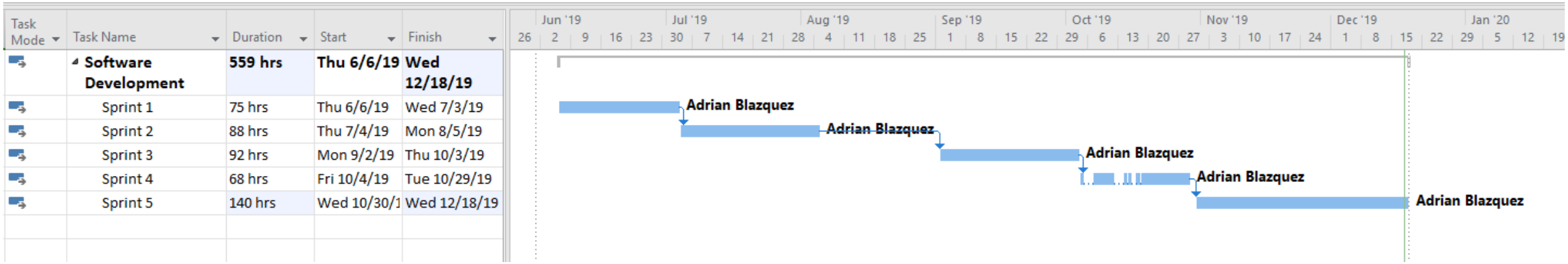


Analysis, design and implementation of component for data exchange with Ocean Protocol

- Sprint 1
- Sprint 2
- **Sprint 3**
- Sprint 4
- Sprint 5

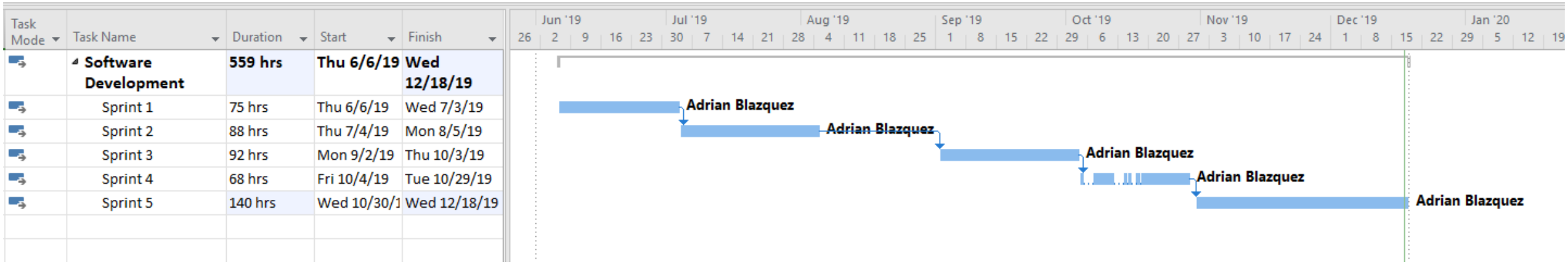
- **1. What is Ocean Protocol? (what is?)**
- **2. Which are its cases of use? (what if/ what wows?)**
- 3. Which value can it add to an data-driven app? (what Works?)



Analysis, design and implementation of component for data exchange with Ocean Protocol

- Sprint 1
- Sprint 2
- Sprint 3
- **Sprint 4**
- Sprint 5

- 1. What is Ocean Protocol? (what is?)
- 2. Which are its cases of use? (what if/ what wows?)
- **3. Which value can it add to an data-driven app? (what Works?) - LabelPop**



Analysis, design and implementation of component for data exchange with Ocean Protocol

- Sprint 1
- Sprint 2
- Sprint 3
- Sprint 4
- **Sprint 5**

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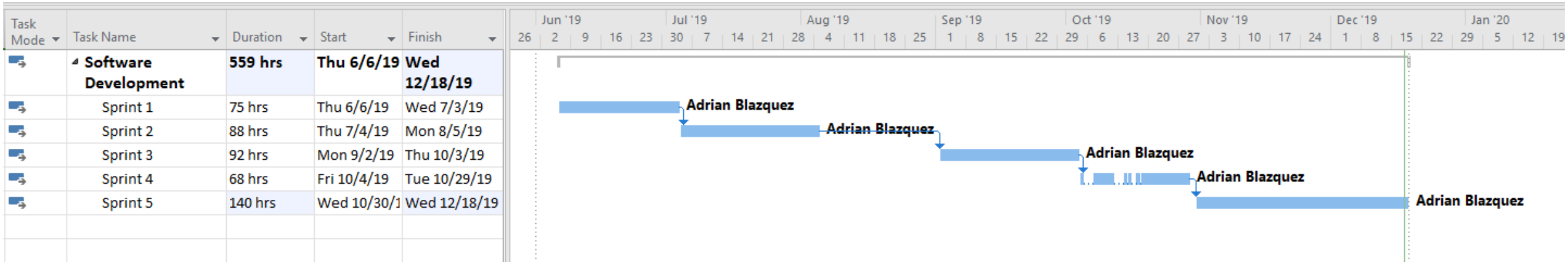
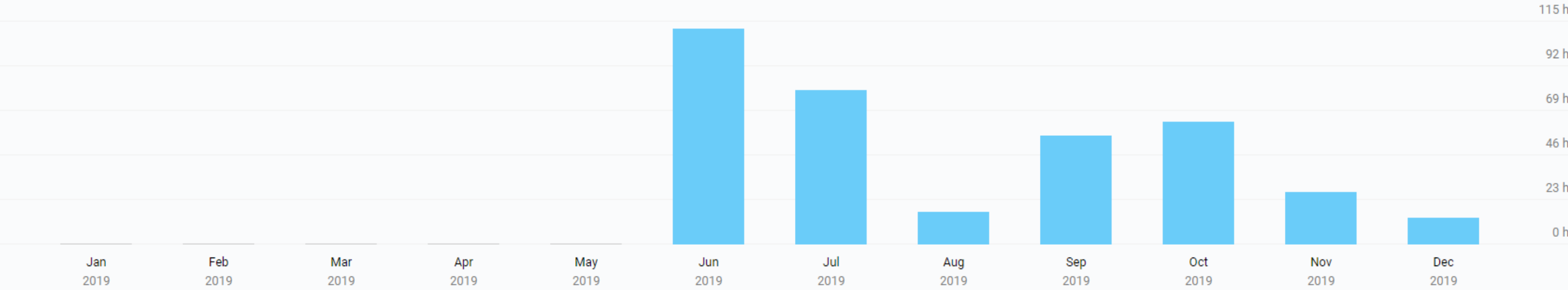


Filter by: Team | Client | 3 Project | Tag | Description

This year



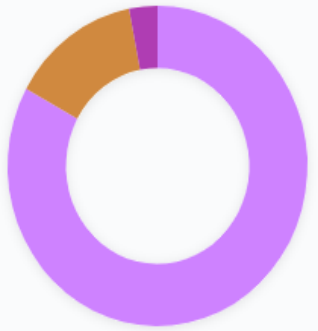
Group by Project and Time Entry

Rounding

CLOCKED HOURS

367:38:00

	TITLE	DURATION
3	TFG	305:07:18
1	TFG_labelPop	51:17:39
1	TFG_parkingPath	11:13:03

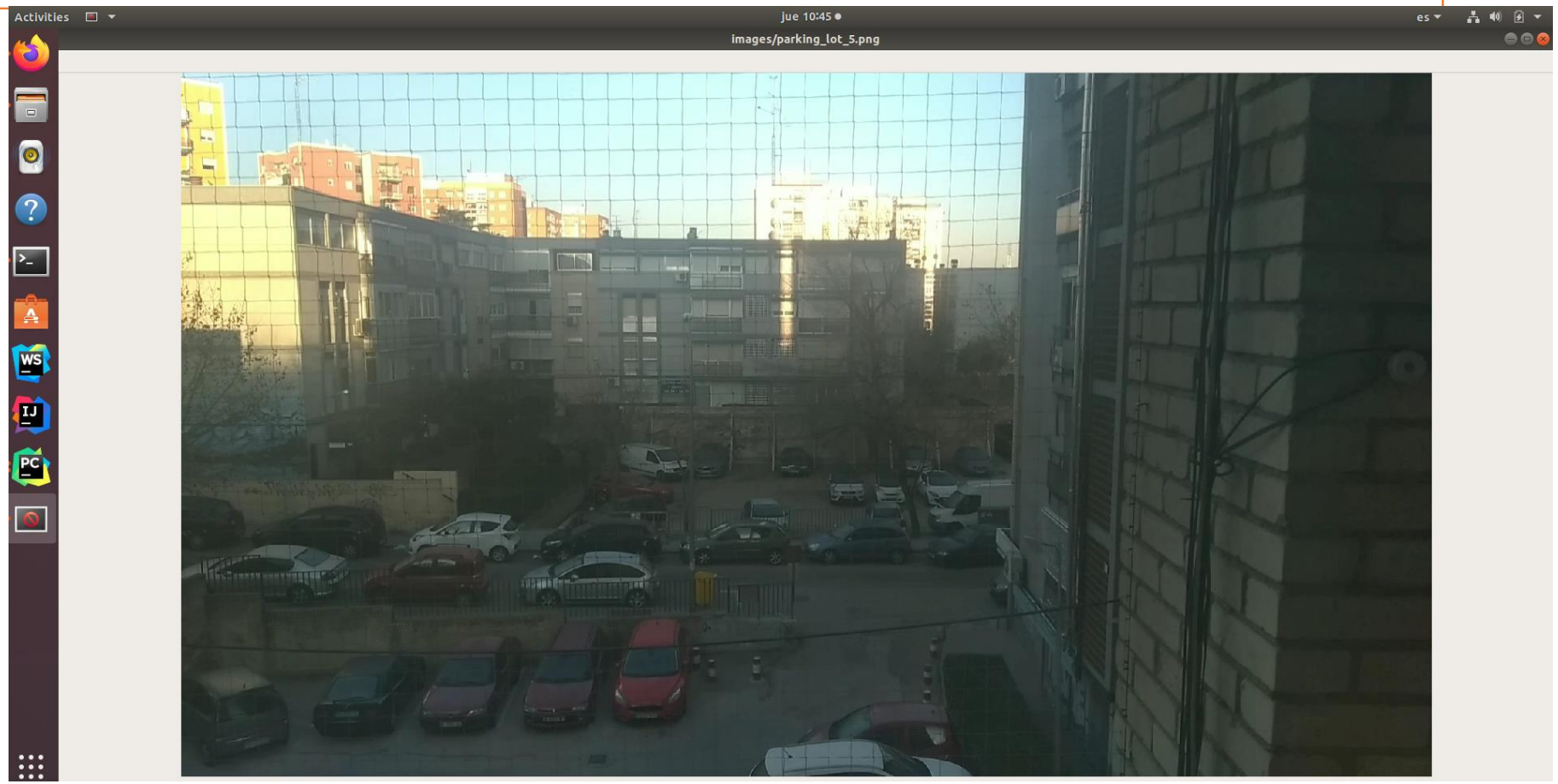


1.Analyze

a. **Analysis**
b. Design
c. Implement

1.Analyze

a. Analysis
b. Design
c. Implement

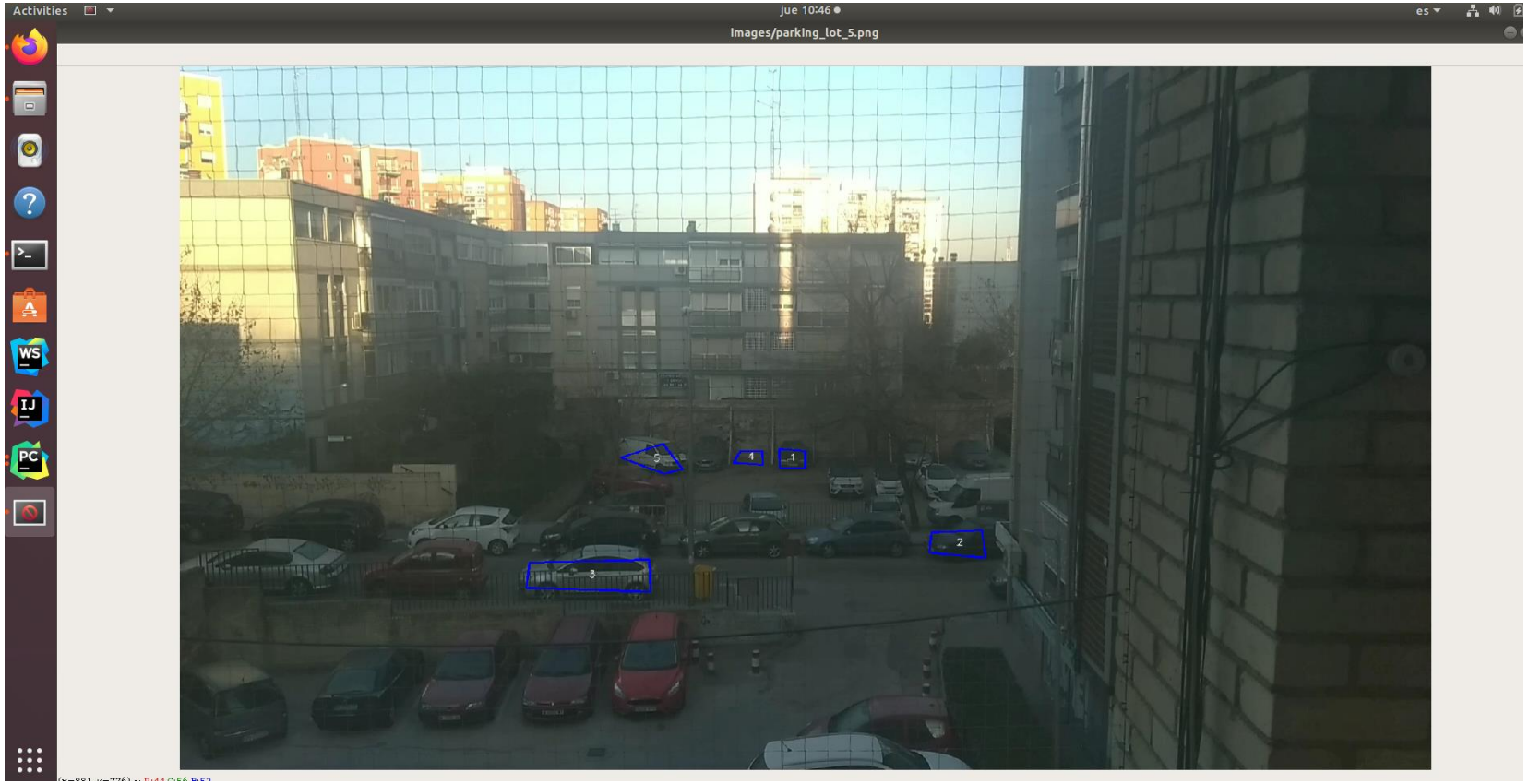


1.Analyze

a. Analysis

b. Design

c. Implement

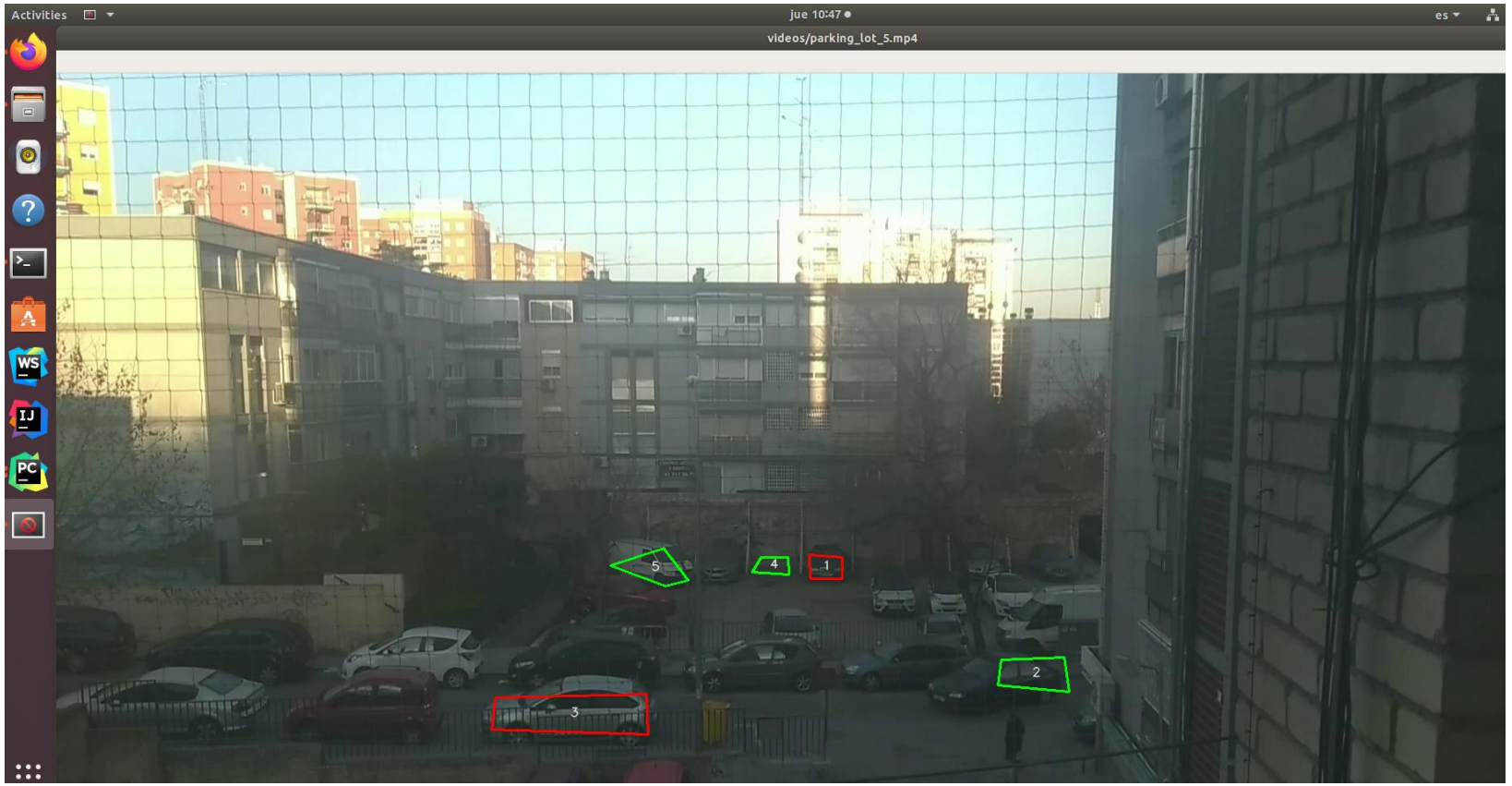


1.Analyze

a. Analysis

b. Design

c. Implement



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a. Analysis

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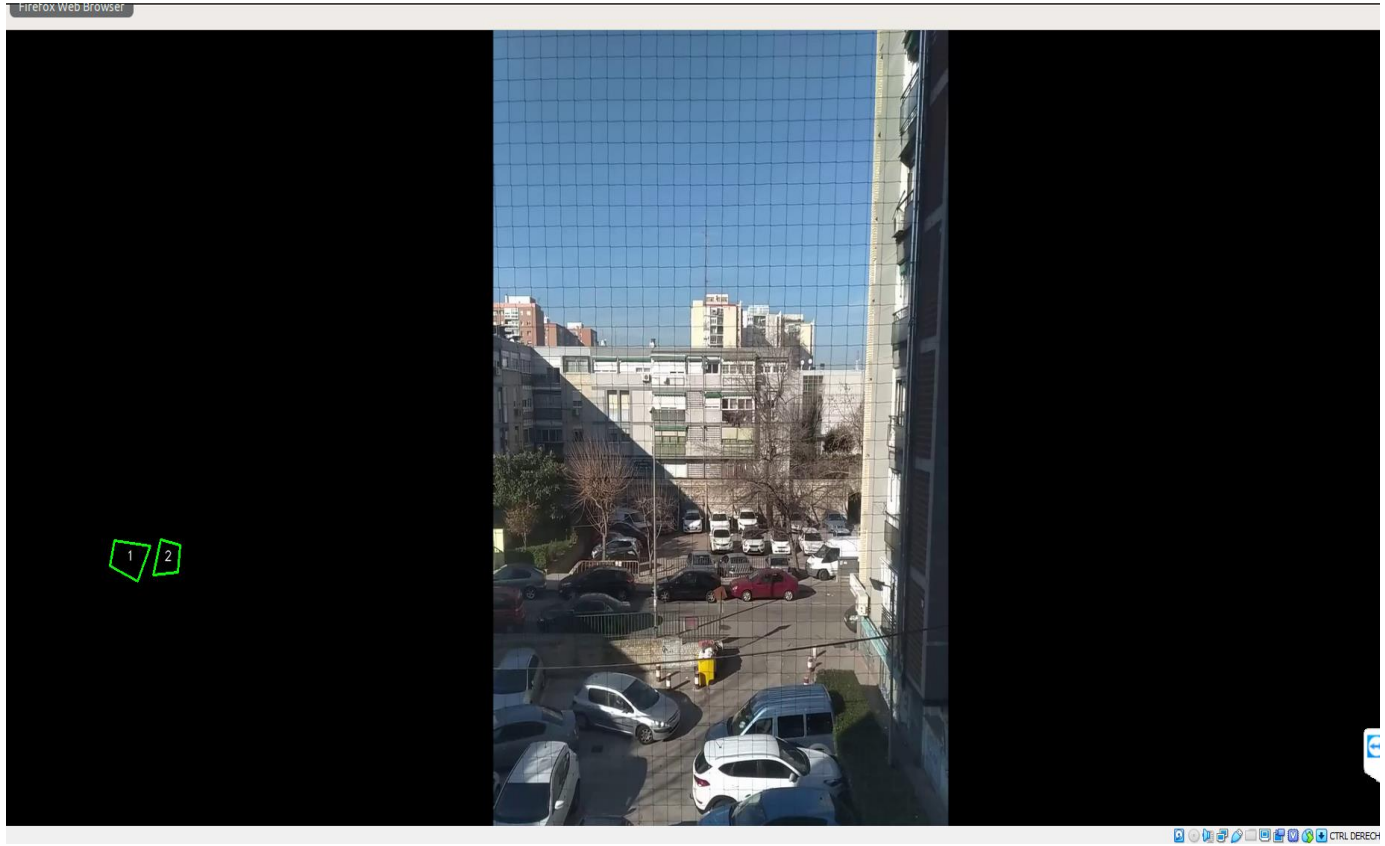
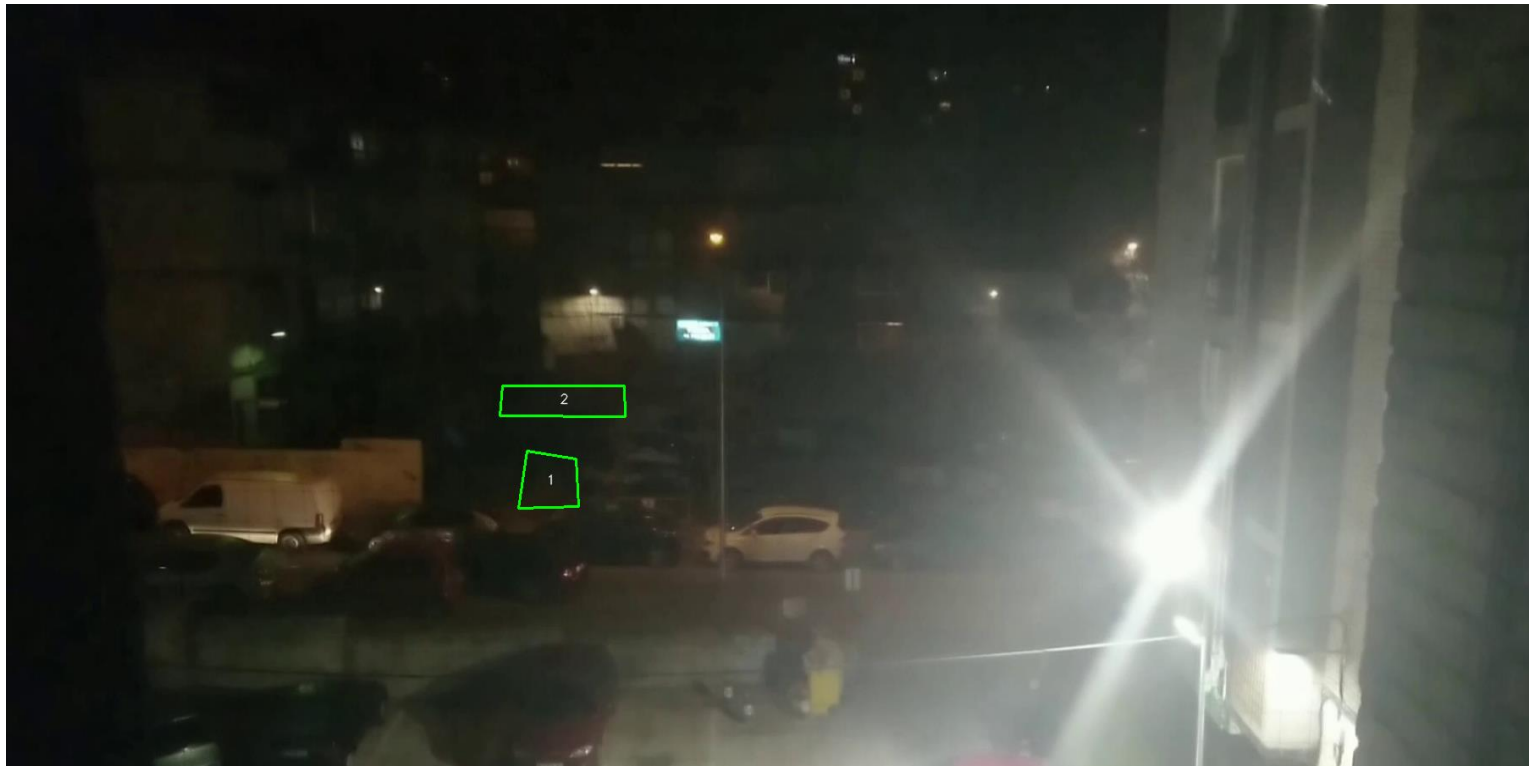


1.Analyze

a. Analysis
b. Design
c. Implement



1.Analyze

Flask base server

ablazleon / gorrilla

lines 67

From stackabuse/welcome

ablazleon / ParkingLot

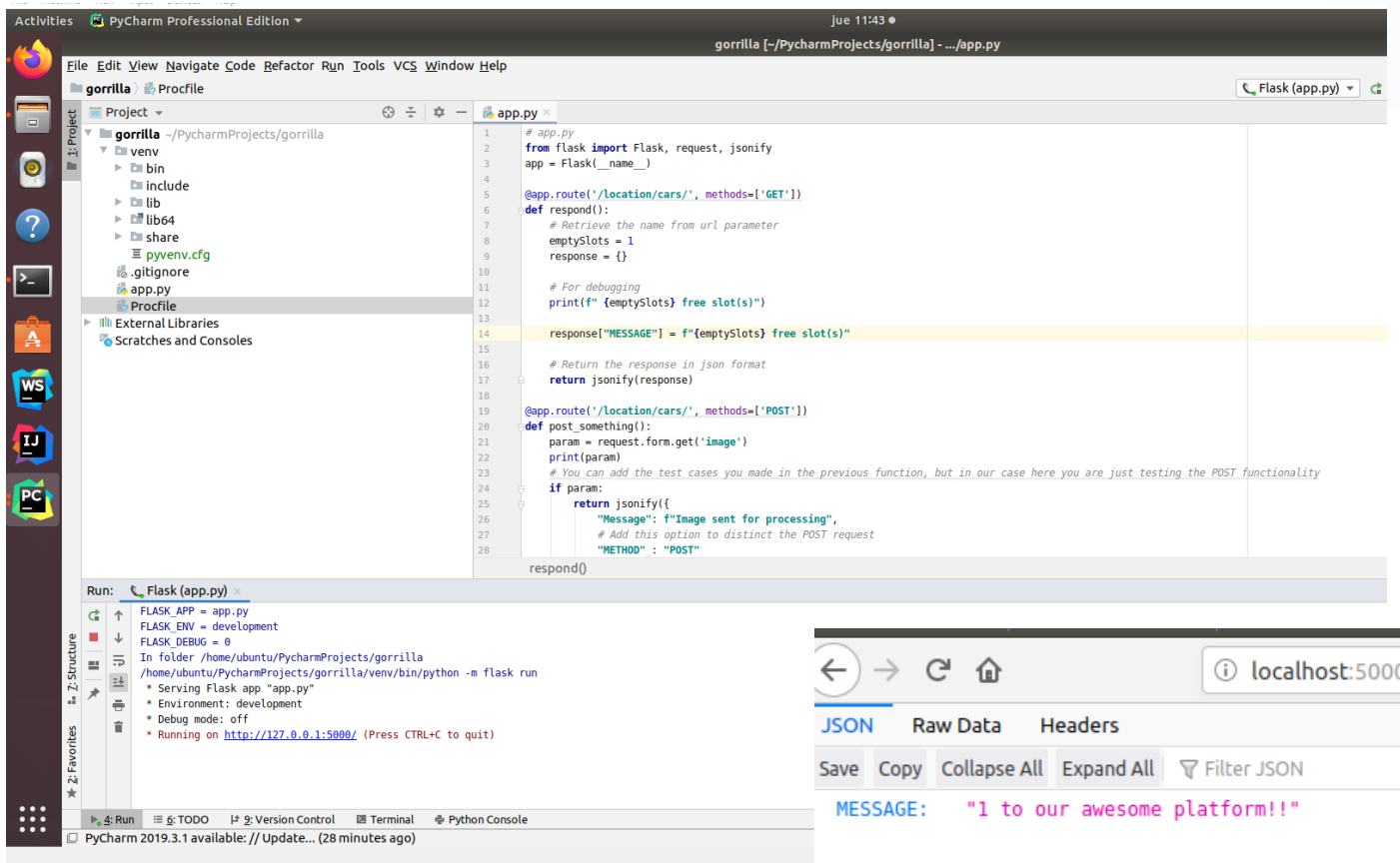
lines 584

forked from olgarose/ParkingLot

a. Analysis

b. Design

c. Implement



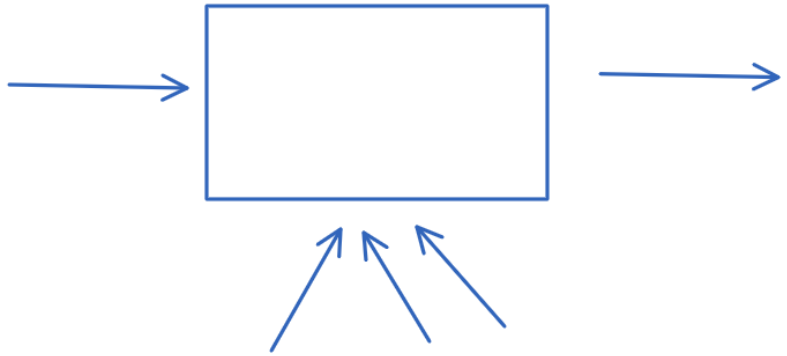
Why exchanging data? | Why with Ocean Protocol? | Why a shop?

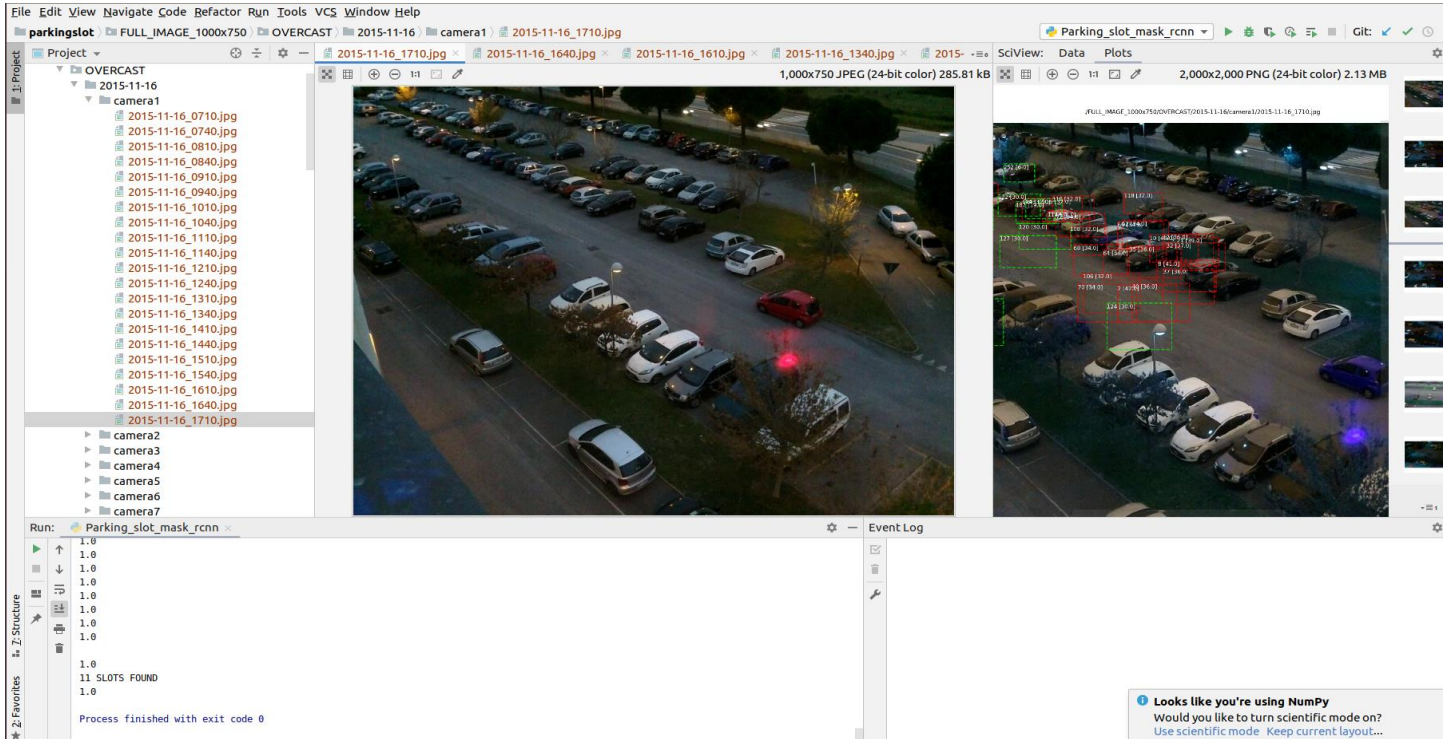
1.Analyze

a. Analysis

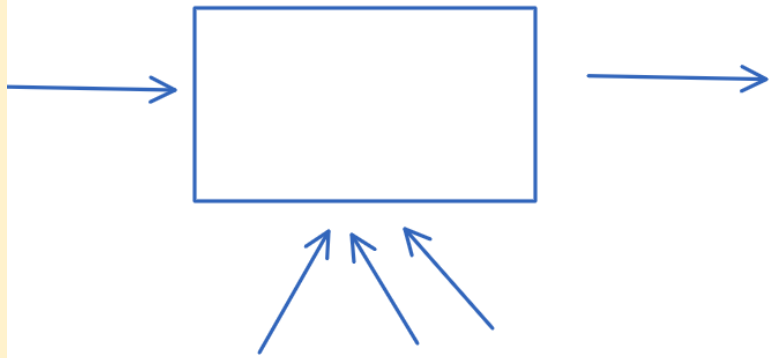
b. Design

c. Implement



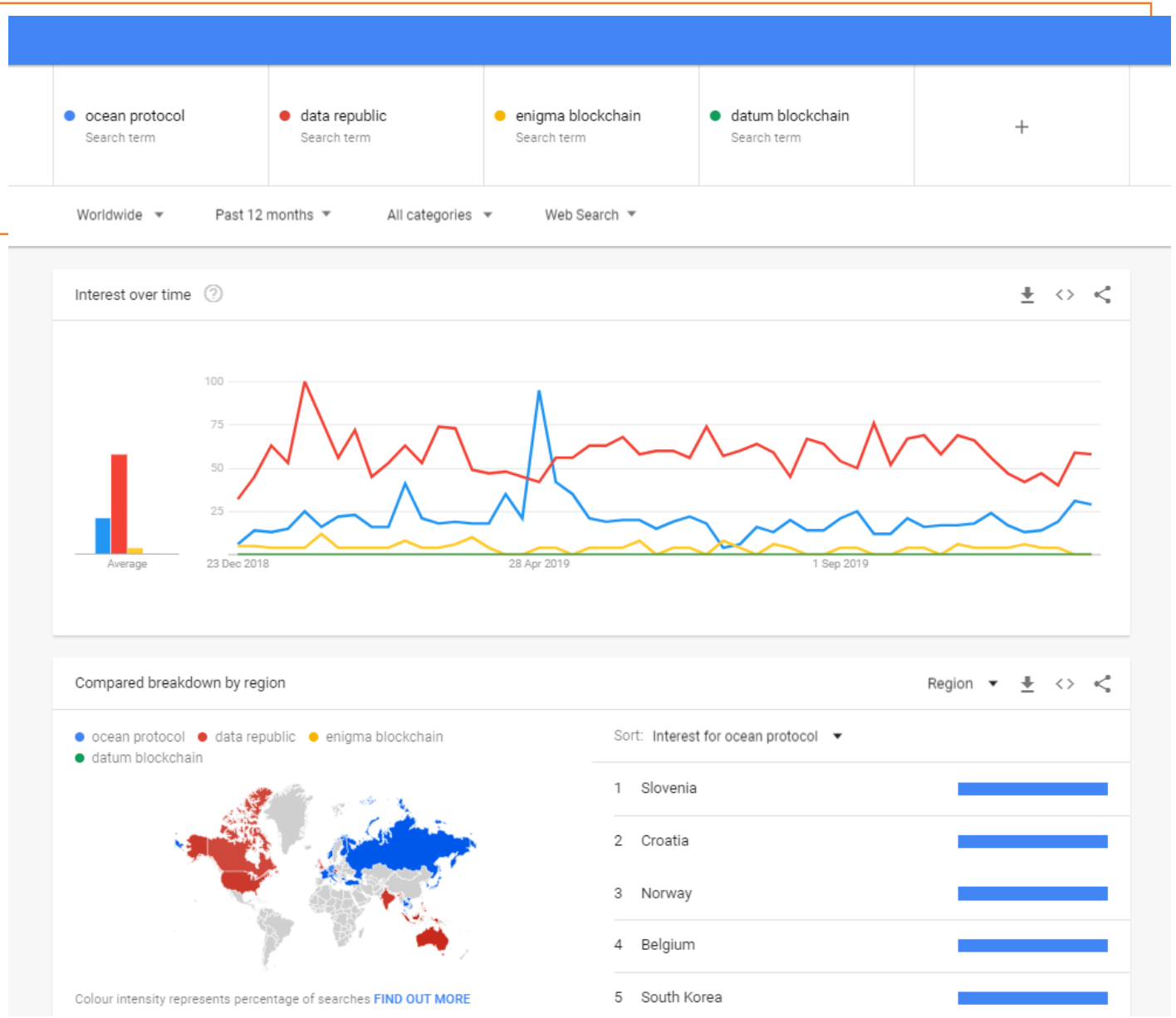


1.Analyze



Ways of exchagning data
No exchange
Github
Kaagle
Ocean Protocol
Rent (like Netflix)

1.Analyze



Why exchaning data? | **Why with Ocean Protocol?** | Why a shop?

1.Analyze

Proposals	Datum	Enigma	Data republic	Ocean Protocol
Based in	Switzerland	United States (from Boston, MIT)	Sydney, Australia	Berlin, Germany
What it is understood they offered?	Cloud storage as AWS S3 but with encryption.	Allow data stored to be computed homomorphically.	Not only store but track this data exchange	Store this access data in a confident strong box. Like a house property.
Intuitive idea	Like a strongbox for data	Like a crystal panel to study data without moving it.	Like a service like Netflix	It assumes everyone has its own strong box; what allows is a wardrobe, to put the strong box key, enabling marketplaces. A registry based in distributed ledge technology. This enable marketplaces for data, as Ebay is for reused things, AirBnB for unused houses. . .not a maeketplace per se.

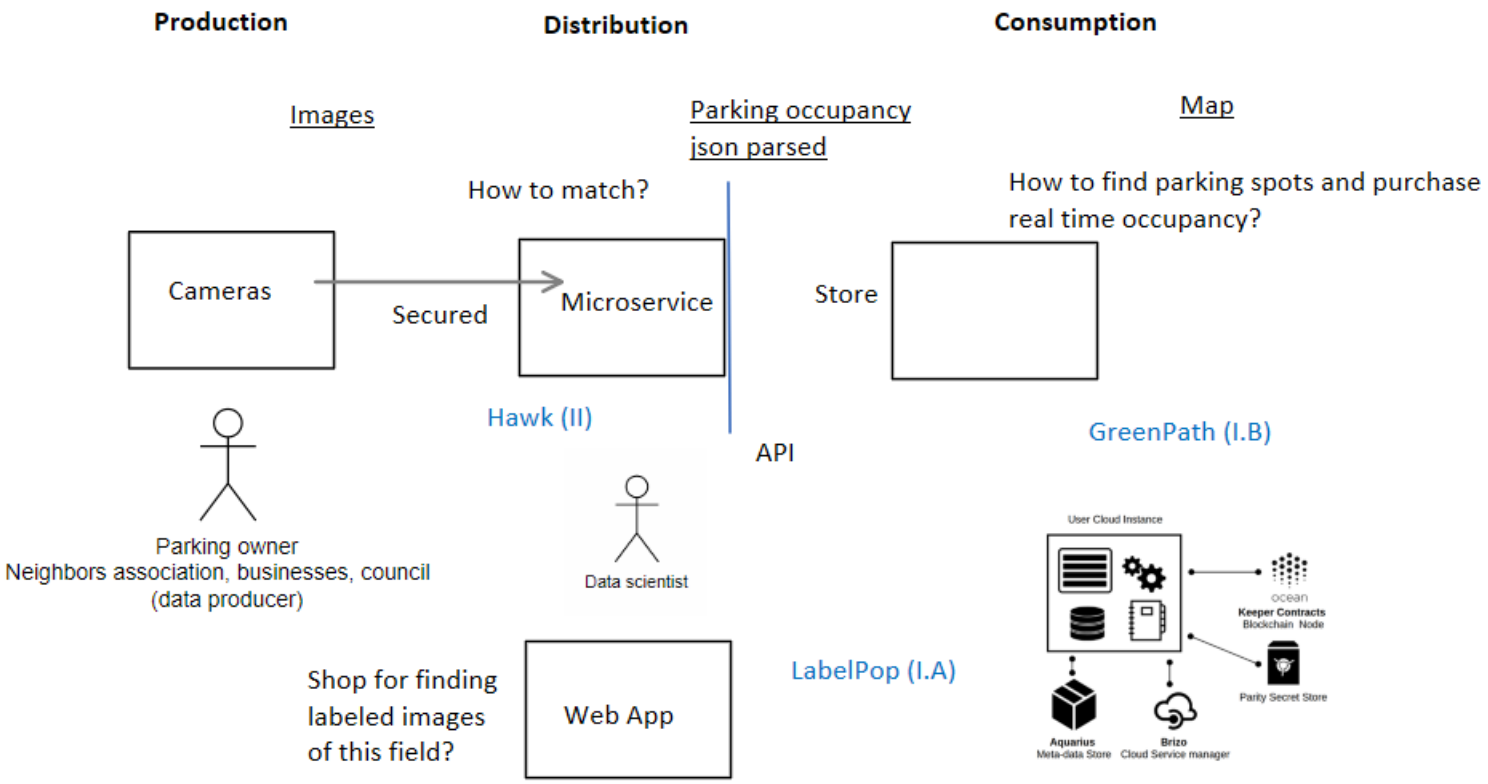
1.Analyze

2. Design

Epic 1: Exchange data and value for labelled images for reducing training time

- User Story 1: A data scientist can publish her labelled images for others to buy them
- User Story 2: A data scientist can search for and purchased the labelled images she needs that has not seeing for free browsing and so is a way to avoid getting them manually

2. Design


Production
Distribution
Consumption
Images
Parking occupancy
json parsed
Map
How to match?
How to find parking spots and purchase
real time occupancy?
Cameras
Secured
Microservice
Store
Hawk (II)
API
GreenPath (I.B)
Parking owner
Neighbors association, businesses, council
(data producer)
Data scientist
User Cloud Instance
ocean
Keeper Contracts
Blockchain Node
Parity Secret Store
Aquarius
Meta-data Store
Brizo
Cloud Service manager
Shop for finding
labeled images
of this field?
Web App
LabelPop (I.A)

2. Design

- Historias de usuario:

El primer servicio, contempla dos historias de usuario (I.A.a y I.A.b). Por un lado, (I.A.a) permitir a los científicos de datos monetizar las imágenes etiquetadas al realizar el servicio de análisis de imágenes en busca de sitio (una especia de modelo Wallapop, eBay o Vinted, "si no lo usas, súbelo", pero para imágenes trabajadas). Si nos ponemos en sus zapatos, yo como científico de datos, que me cuesta almacenar estas imágenes etiquetadas en una base de datos AWS S3 20 céntimos 1 GB al año, poniendo el precio a 20 céntimos, con tal de que en un año los comprase mundialmente 5 (con Madrid 360, el auge de smart cities a nivel global . . .) ganaría 1 € por algo que iba a borrar. Eso sí, este servicio debiera también posibilitarme borrar toda la información personal de las imágenes, como caras o matrículas por las que pueda yo ser sancionado. En resumen, por motivos económicos me interesaría poder publicar en este "wallapop", e incluso cederle parte de mis ganancias.

Y por otro lado, (I.A.b) permitir a los científico de datos/entrenadores de redes neuronales que necesitan imágenes para mejorar la exactitud del análisis de parking libre, reducir el tiempo al mercado de su servicio adquiriendo imágenes etiquetadas. En general a este servicio o epic (I.A) , lo he propuesto llamar LabelPop.

2. Design

- LabelPop

[User Story]
Permitir a los científicos de datos monetizar las imágenes etiquetadas al realizar el servicio de análisis de imágenes en busca de sitio

Demo con imágenes de CNNpark (imágenes segmentadas)

2. Design

- LabelPop

[User Story]

Permitir a los científico de datos/entrenadores de redes neuronales que necesitan imágenes para mejorar la exactitud del análisis de parking libre, reducir el tiempo al mercado de su servicio adquiriendo imágenes etiquetadas.

ALL CONVERSATIONS
oceanprotocol

When publish is clicked, a meta mask notification for signature request pop up appeared. After signing the request, the asset did not appear in the data set page.

Matthias Kretschmann @kremalicious Jun 13 11:07
Could you try again with current `develop` please? We just bumped all default versions with oceanprotocol/barge#156

lychongaa @lychongaa Jun 13 11:40
Um... It still doesn't work after pulling the newest version of develop, pruning the docker and restarting ocean protocol.

Matthias Kretschmann @kremalicious Jun 13 12:43

I just tried `./start_ocean.sh` (local Spree node is the default) and I was able to publish assets successfully. Are you connected to Nile in your MetaMask before doing so?

Maybe also some Pleuston caching, it's running a service worker for offline caching and there might be something old stuck in there. To be sure, you could purge that data too

lychongaa @lychongaa Jun 13 16:52
Oh, clearing the browser's cache works. Thank you very much :)

GO TO BOTTOM

Click here to type a chat message. Supports GitHub flavoured markdown.

PEOPLE
ADD SEE ALL (218 PEOPLE)

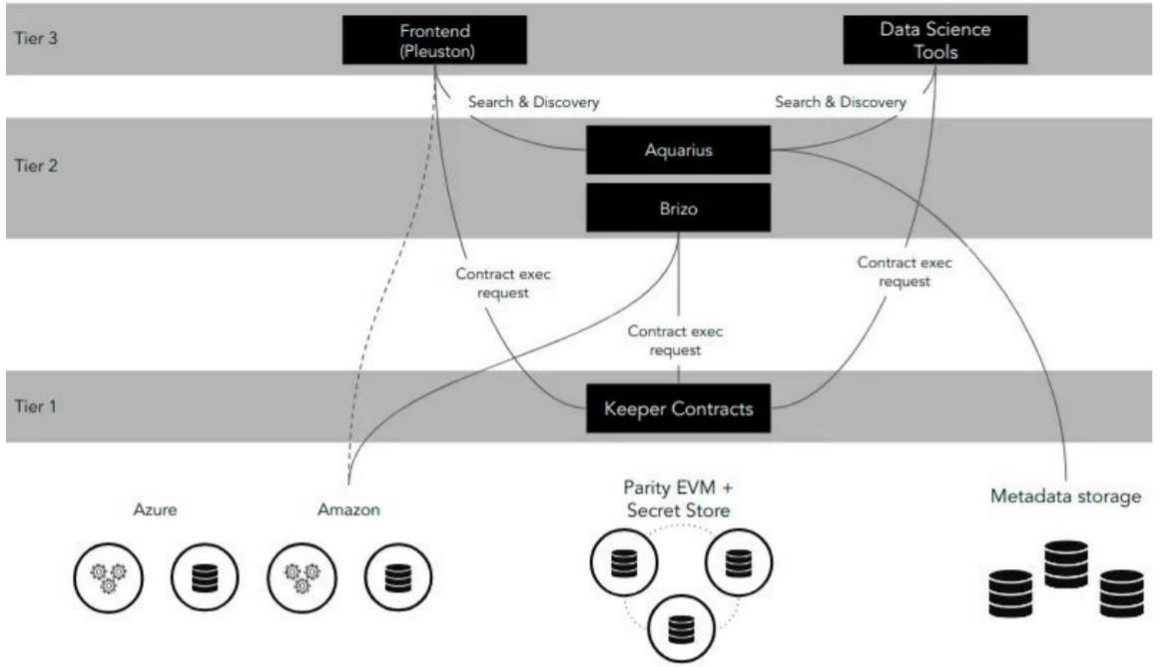
3. Implementation

Objectives:

3. Build and test

LabelPop

Parking slot image analyzer



3. Implementation

LabelPop

Parking slot image analyzer

	Publish dataset	Dataset search	Purchase	Price
1. Pleuston	Yes	Yes	No (in version Oct 4, it was archived by the ocean team)	Yes
1. Commons	Yes	Yes	Yes	No
1. React-squid.js tutorial	Yes	No	Yes	Yes
1. Squid-py	Not graphically, but in a cli	Not graphically, but in a cli	Not graphically, but in a cli	Yes
1. Commons + price	Yes	Yes	Yes	Yes

Ubuntu 18.64 [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Firefox Web Browser dom 12:35 es

LabelPop - LabelPop - Mozilla Firefox

GitHub - oceanprotocol ablazleon/commons: TFG - Google Drive LabelPop - LabelPop

localhost:3000 90%

ocean LabelPop

Channels Publish History Faucet About

LabelPop

A marketplace to find and publish open data sets in the Ocean Network.

e.g. shapes of plants SEARCH

Featured Channel

AI For Good

AI for Good is an initiative to promote the use of artificial intelligence for good causes.

Browse the channel →

No data sets found.

Latest published assets

Type here to search ESP 9:35 PM

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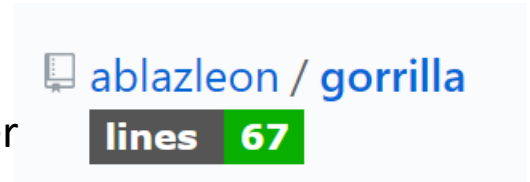

Parking analyzer

Analysis, design and implementation of component for data exchange with Ocean Protocol

Conclsuions

1. **What i learnt**
2. **For what i am glad**
3. **Future lines**

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That's all Folks!
Thanks for your attention!