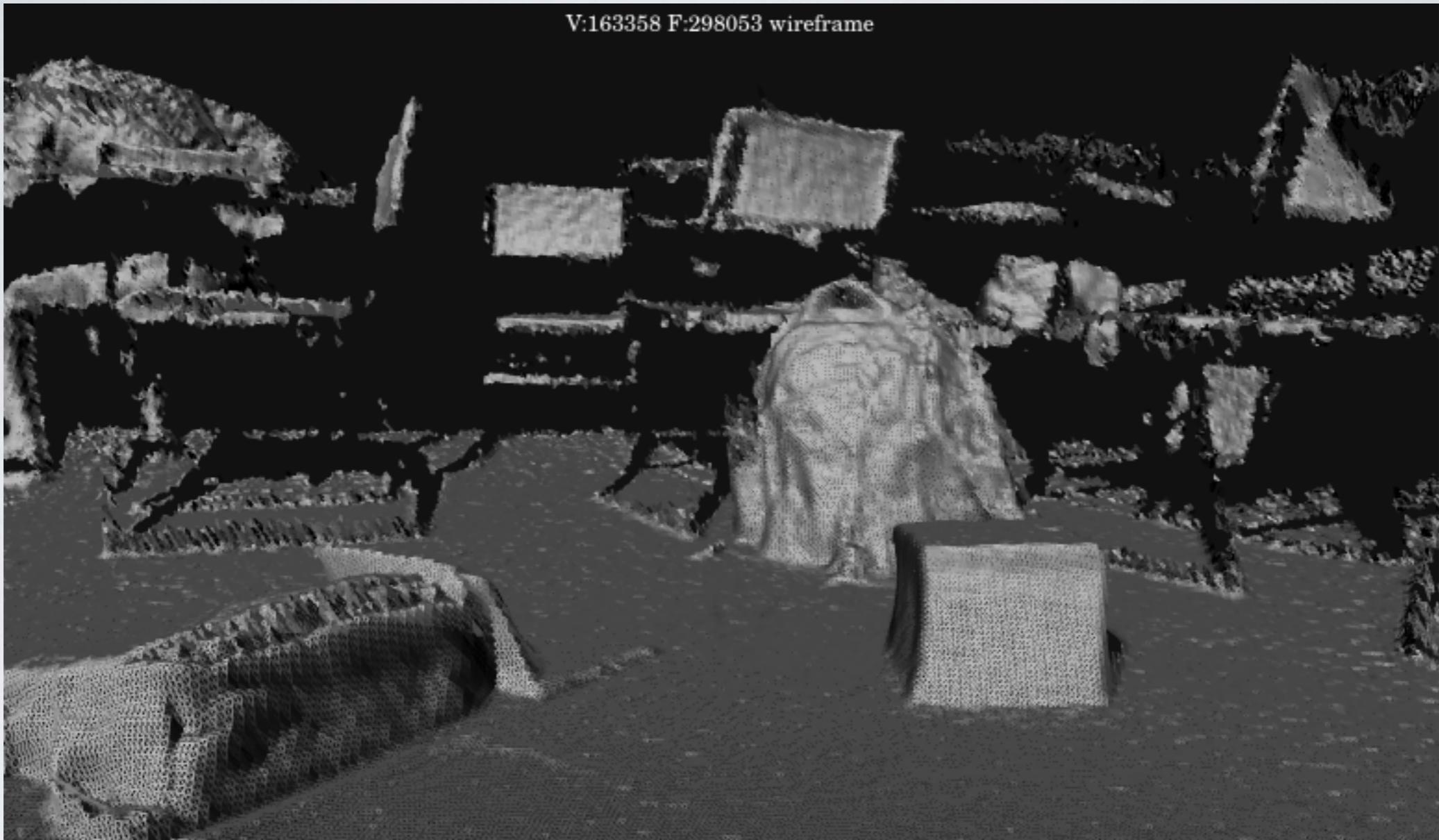


V:163358 F:298053 wireframe



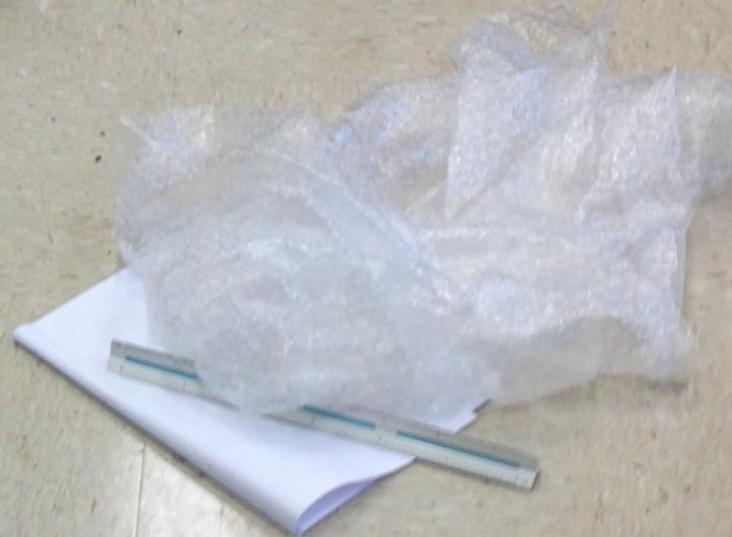
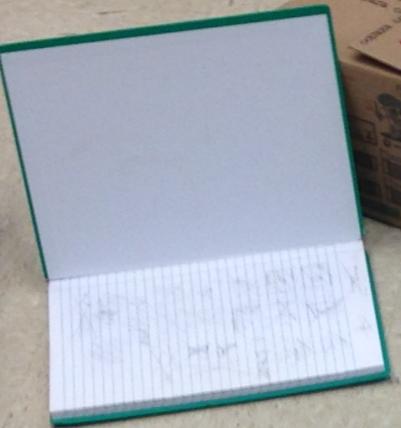
WHERE IS MY ALI EXPRESS PACKAGE?

Felipe Scrochio Custodio - 9442688
Gabriel Henrique Campos Scalici - 9292970

OBJETIVOS

- Extrair informações 3D do sensor **KINECT V2**
- Reconhecer objetos 3D em uma cena
- Visualização da nuvem de pontos

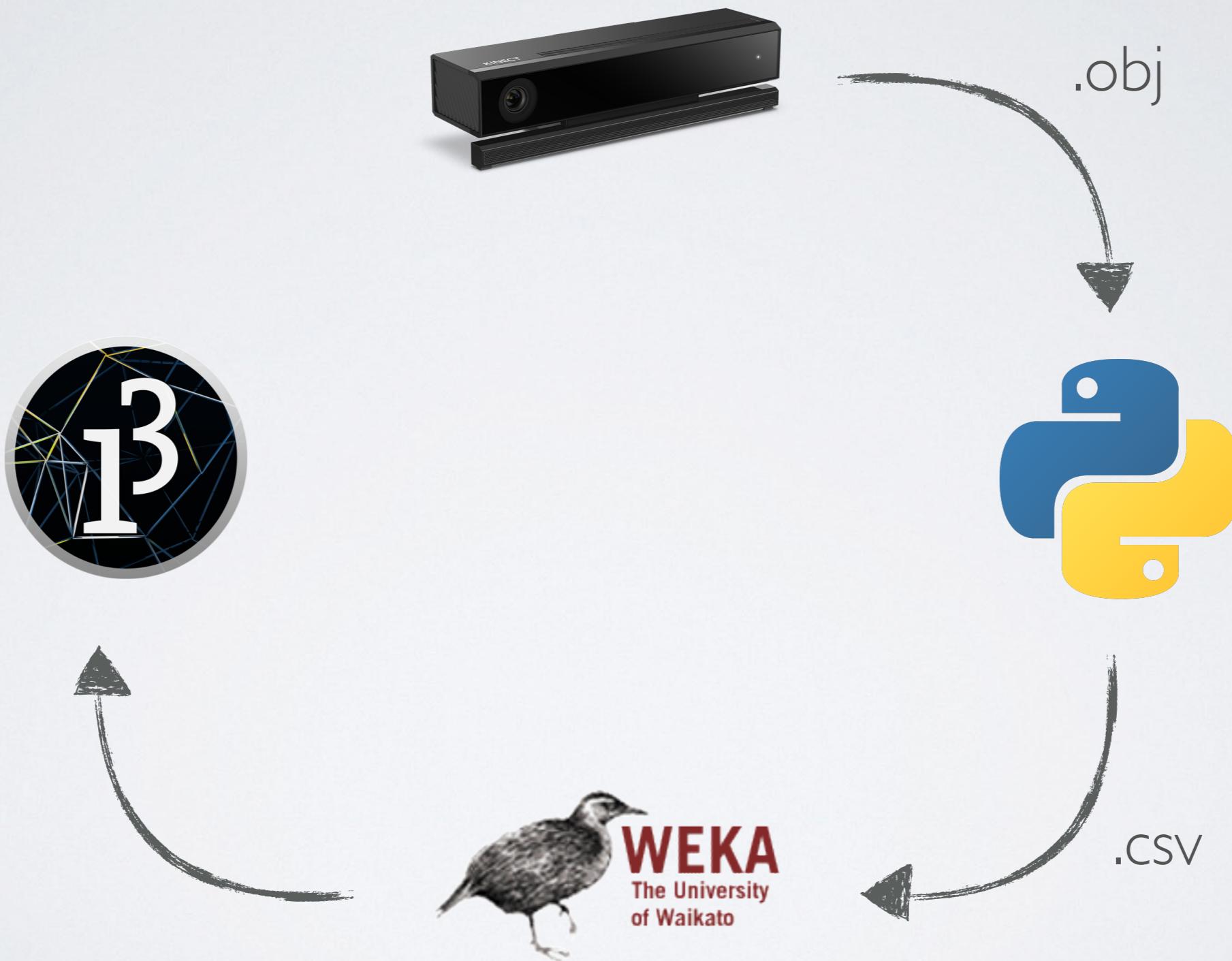


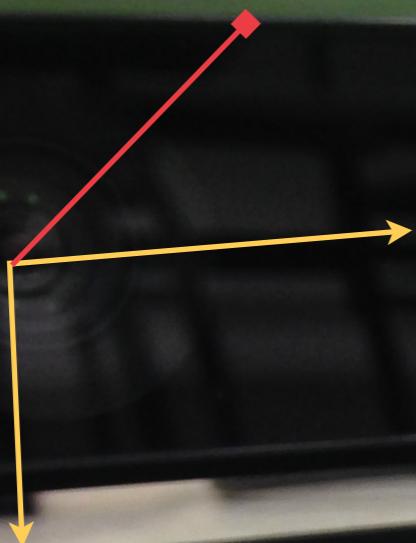
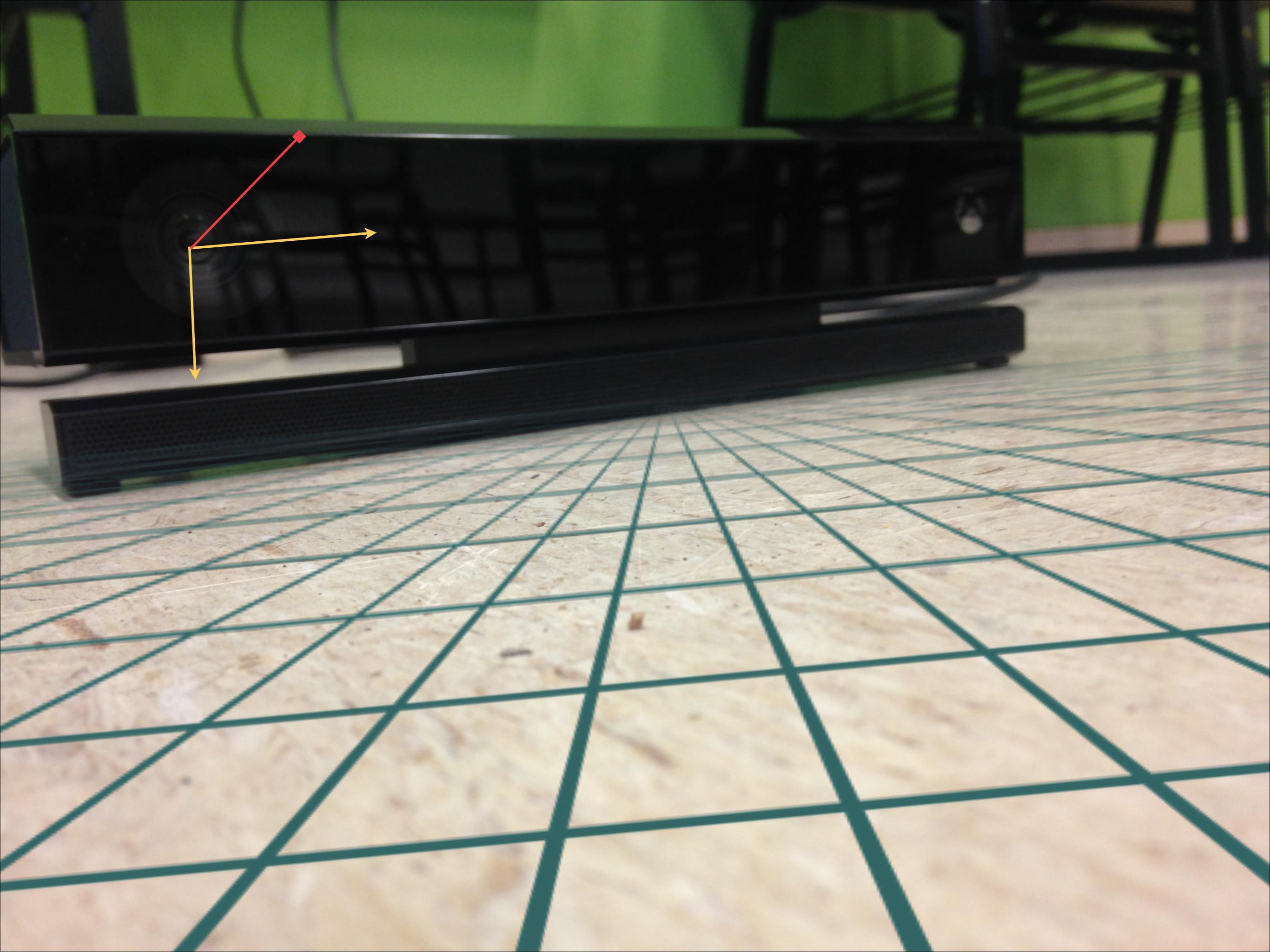


FERRAMENTAS UTILIZADAS

- Processing
- Python
- Weka
- Kinect V2
- Estoque da cantina
- Jean Amaro

WORKFLOW





PROCESSING

Point Cloud



WEKA

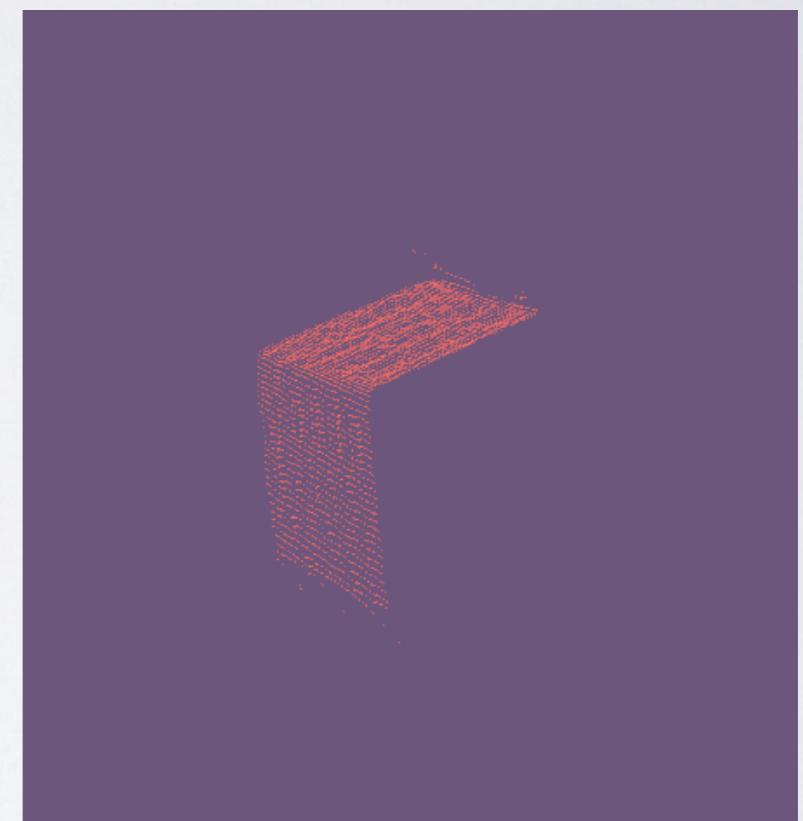
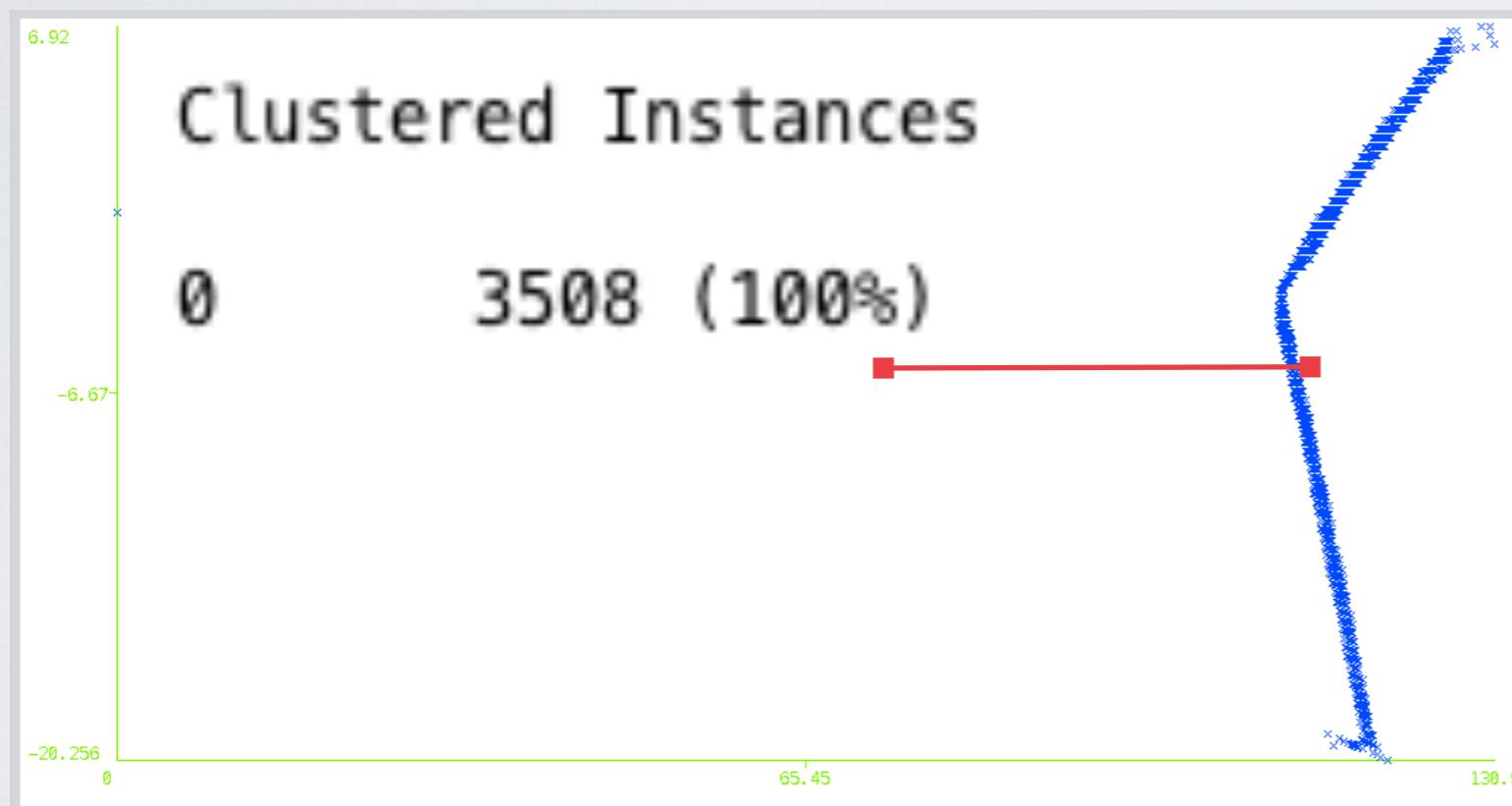
Clusterização utilizando
K-Means



CAIXA

Cluster único

Nuvem de pontos apenas da caixa obtida em Processing



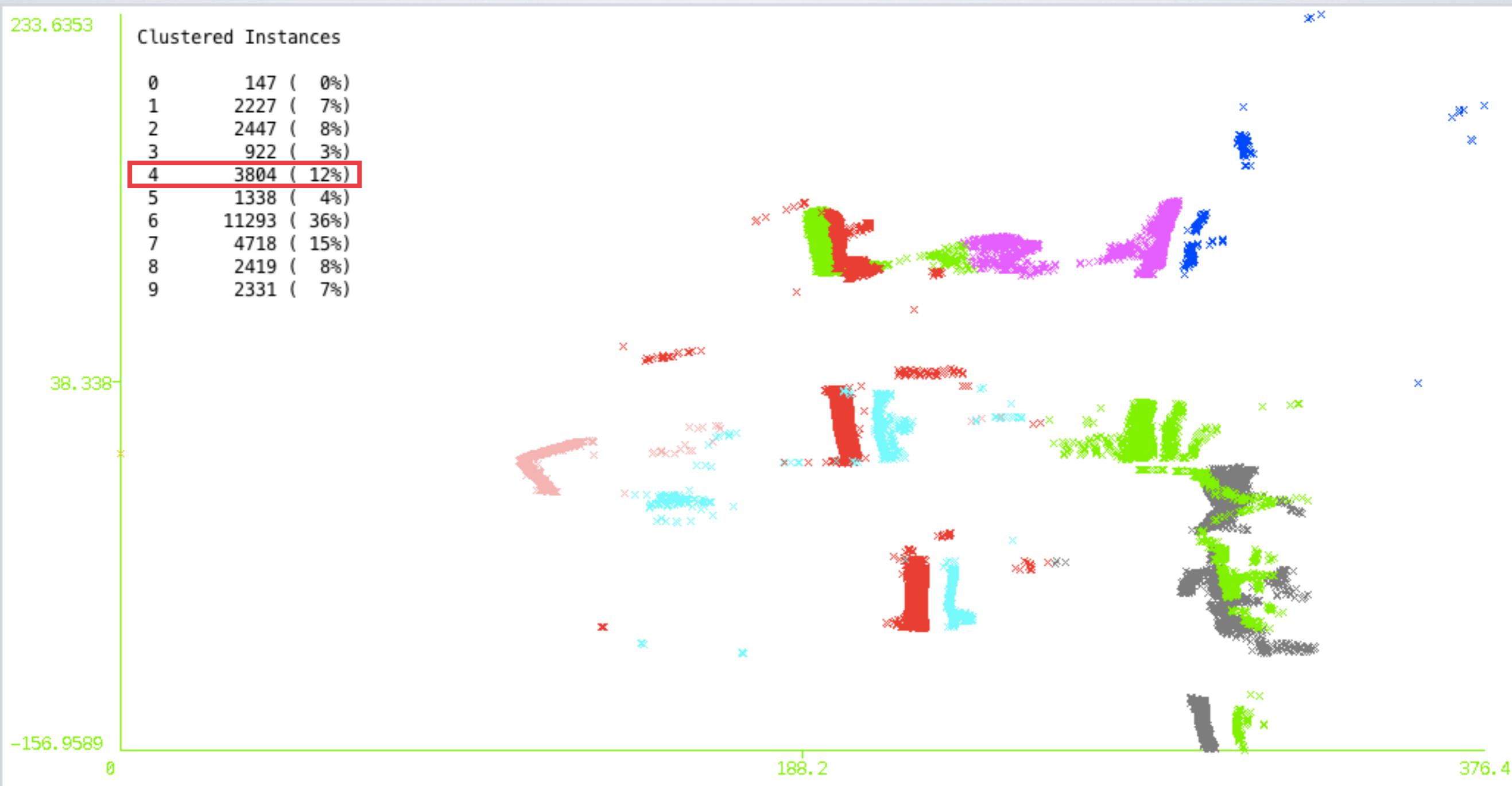
3508 - Valor a ser comparado com os outros clusters

SCENE I



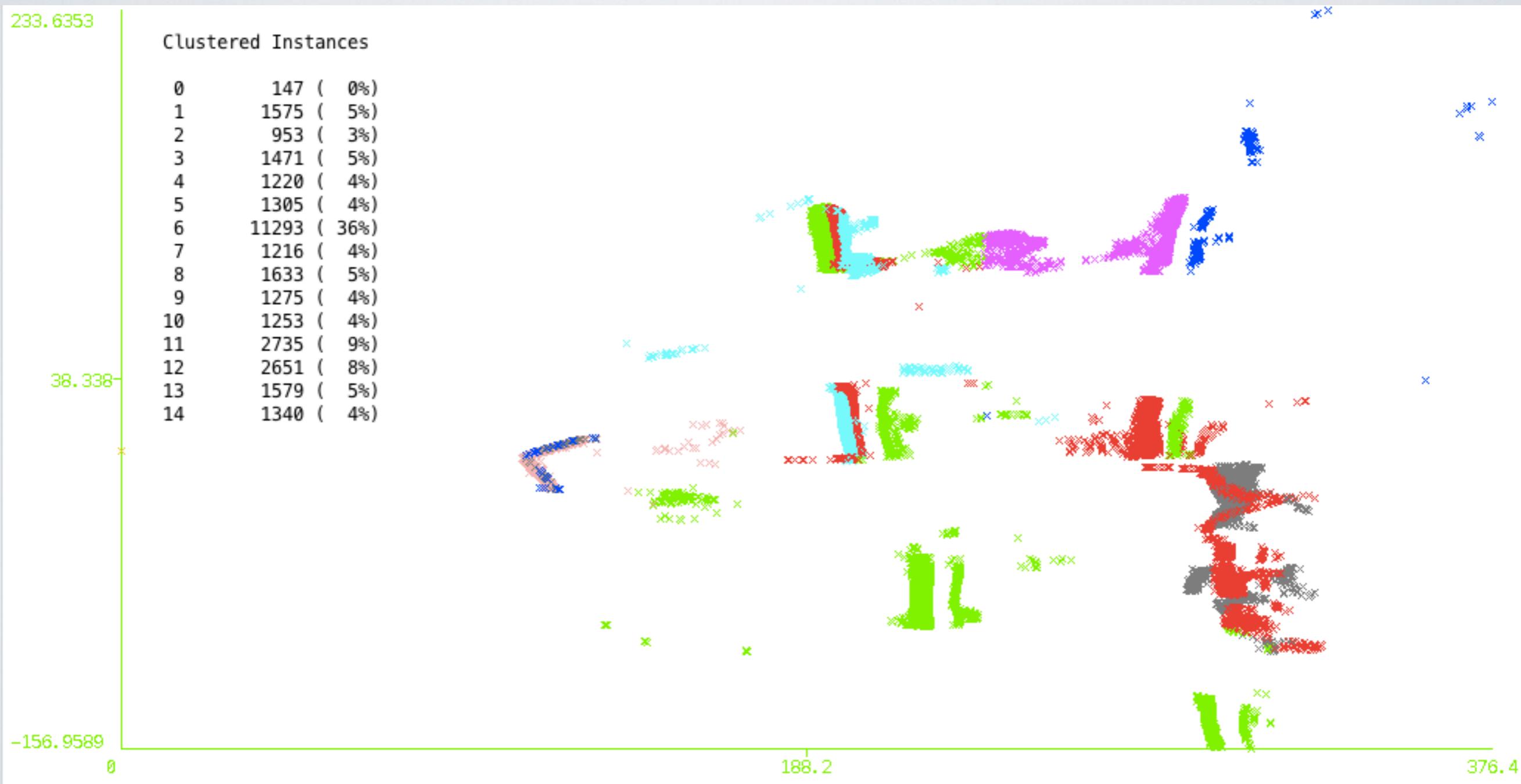
SCENE I

10 Clusters | Caixa = Cluster 4



SCENE I

15 Clusters | Caixa se mistura

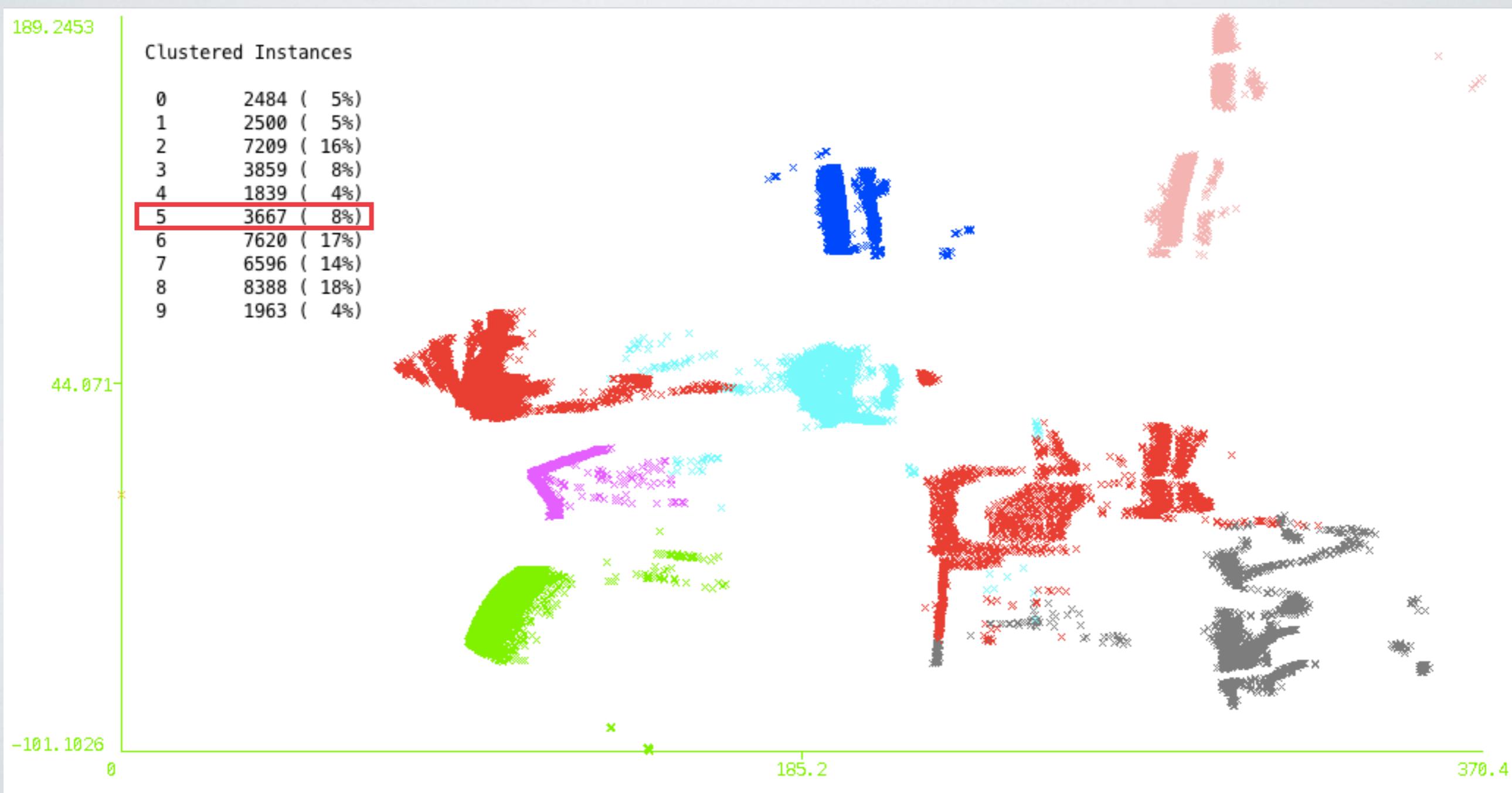


SCENE 2



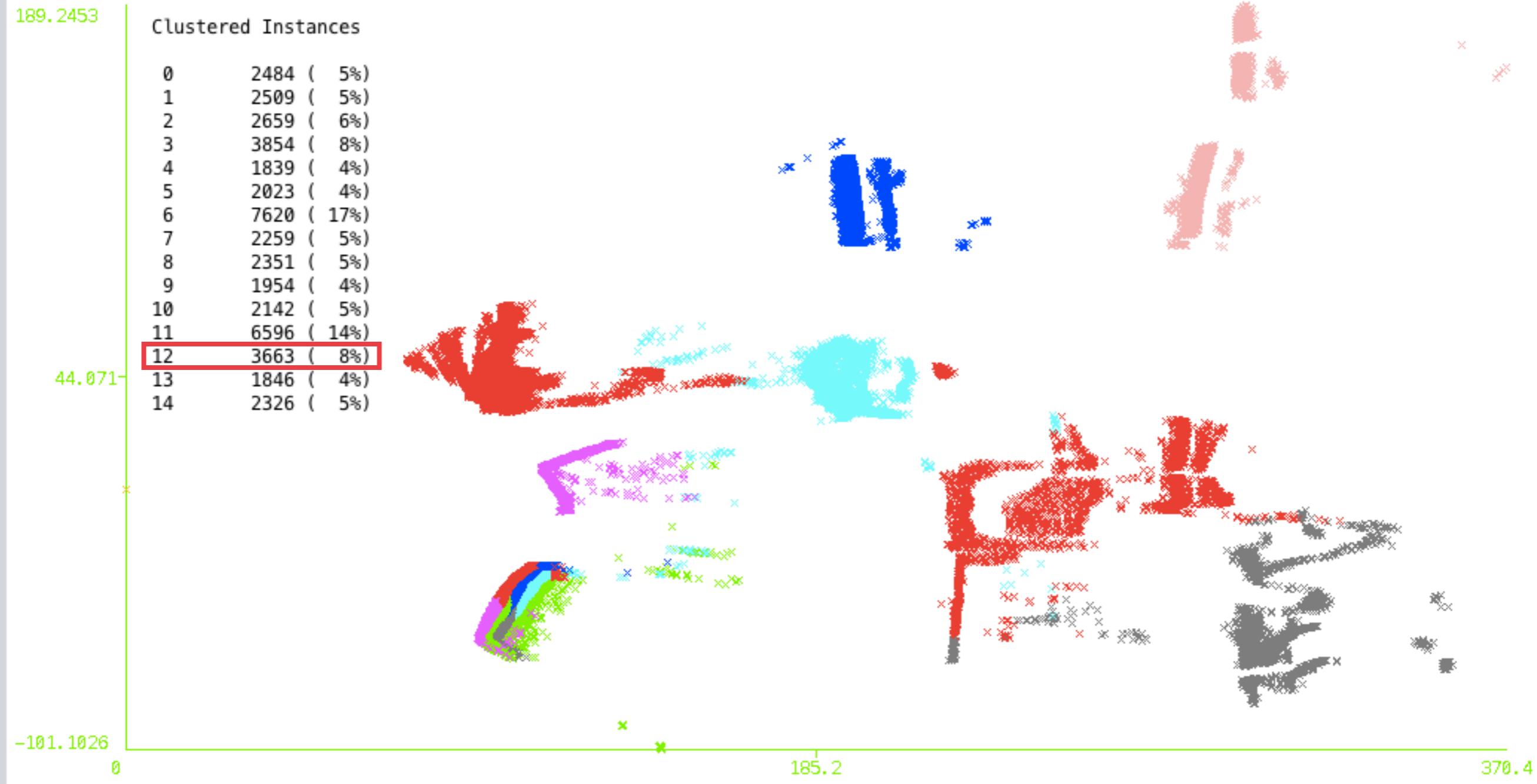
SCENE 2

10 Clusters | Caixa = Cluster 5



SCENE 2

15 Clusters | Caixa = Cluster 12

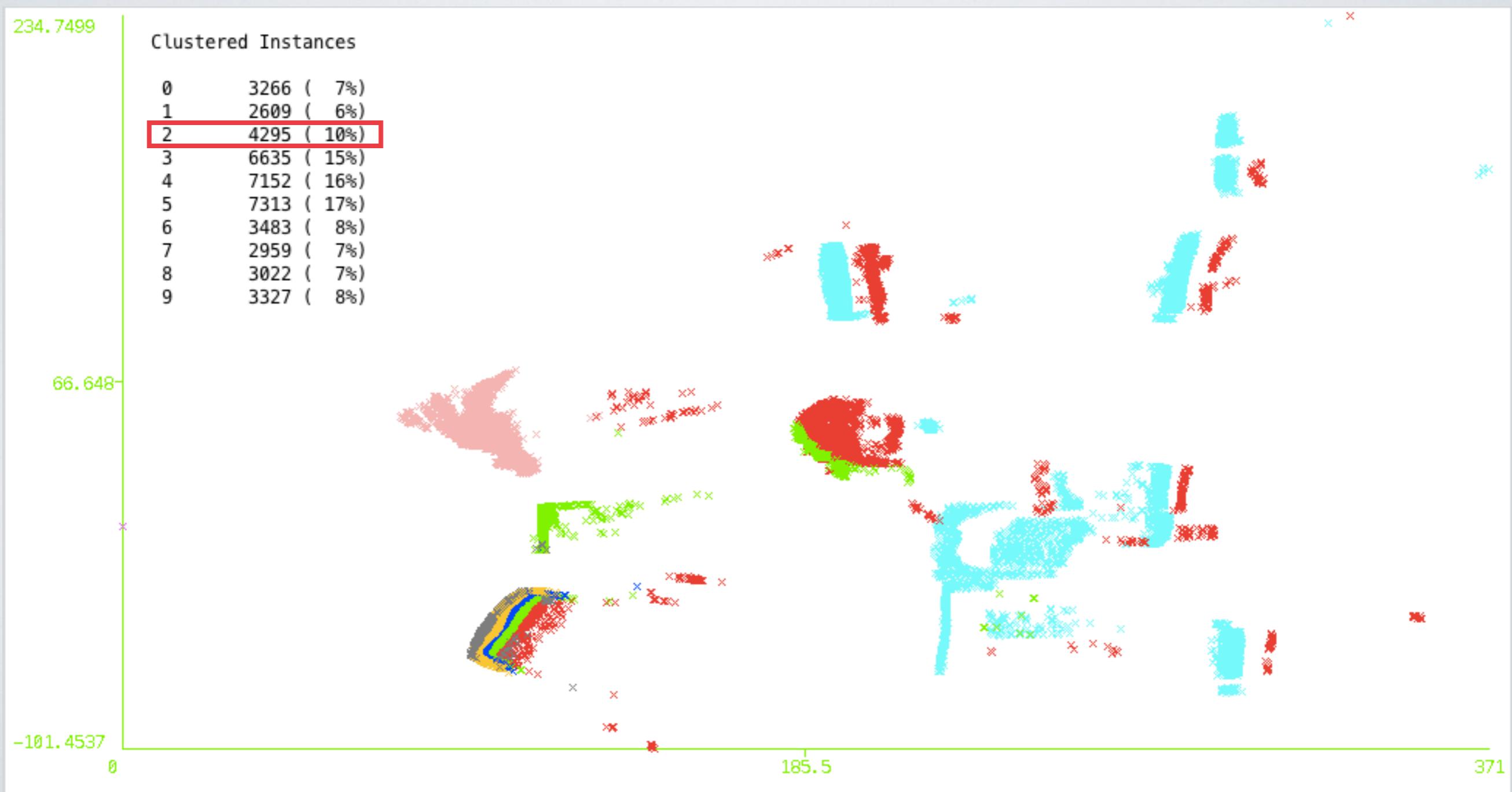


SCENE 3



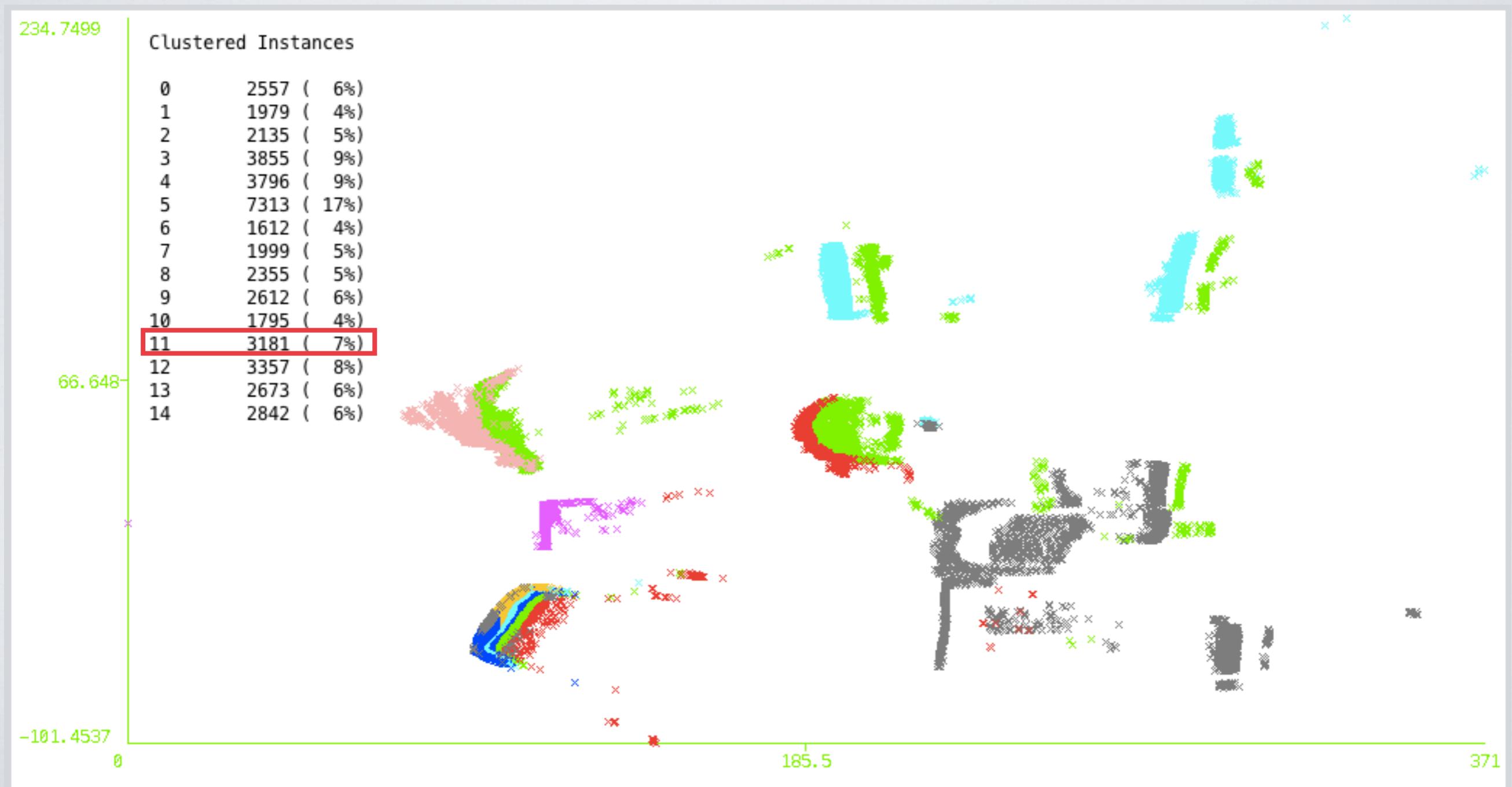
SCENE 3

10 Clusters | Caixa = Cluster 2



SCENE 3

15 Clusters | Caixa = Cluster 11



PROCESSING

Objeto identificado



Do Weka, retiramos o cluster
do objeto encontrado para
obter sua posição



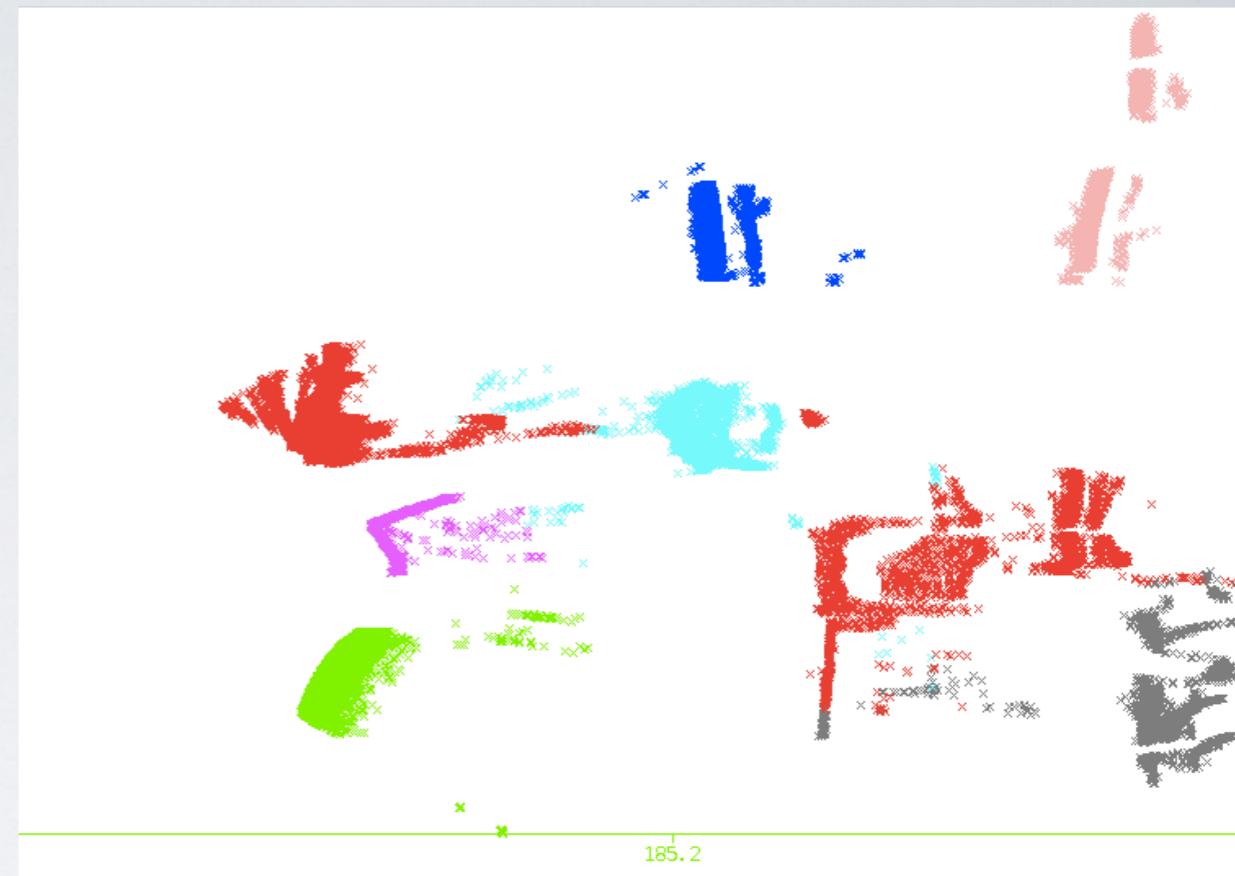
```
x,y,z
7.0327803492546,115.0000095367432,11.3685451447964
5.101053789258,113.80000114440921,6.910414993763
5.1017213612795,113.80000114440921,5.3585764020681
5.4122686386108,113.80000114440921,5.0480268895626
5.1063183695078,113.9000058174133,5.052576586604101
5.4123818874359,113.80000114440921,4.7375775873661
5.1064256578683995,113.9000058174133,4.7418478876352
5.106620490550999,113.9000058174133,4.1203357279301
```

```
Plot : 23:30:39 - SimpleKMeans (SCENE2)
Instance: 27103
Instance_number : 27102.0
    x : 7.0327803492546
    y : 115.0000095367432
    z : 11.3685451447964
Cluster : cluster5

Plot : 23:30:39 - SimpleKMeans (SCENE2)
Instance: 31697
Instance_number : 31696.0
    x : 5.101053789258
    y : 113.80000114440921
    z : 6.910414993763
Cluster : cluster5

Plot : 23:30:39 - SimpleKMeans (SCENE2)
Instance: 33657
Instance_number : 33656.0
    x : 5.1017213612795
    y : 113.80000114440921
    z : 5.3585764020681
Cluster : cluster5

Plot : 23:30:39 - SimpleKMeans (SCENE2)
Instance: 34053
Instance_number : 34052.0
    x : 5.4122686386108
    y : 113.80000114440921
    z : 5.0480268895626
Cluster : cluster5
```

```
v -0.040946226567030 1.106000065803528 0.094296492636204
v -0.044002156704664 1.106999993324280 0.094380028545856
v -0.047105852514505 1.109000086784363 0.094548717141151
v -0.050220269709826 1.111000061035156 0.094717264175415
v -0.053345408290625 1.113000035285950 0.094885692000389
v -0.056481245905161 1.115000009536743 0.095053978264332
v -0.059574399143457 1.116000056266785 0.095136918127537
v -0.062672778964043 1.117000102996826 0.095219708979130
v -0.065835200250149 1.119000077247620 0.095387637615204
v -0.068946711719036 1.120000004768372 0.095470190048218
v -0.07212772203732 1.122000098228455 0.095637880265713
v -0.075252324342728 1.123000025749207 0.095720179378986
v -0.078521579504013 1.126000046730042 0.095972850918770
v -0.081734441220760 1.128000020980835 0.096140153706074
v -0.084882698953152 1.129000067710876 0.096222102642059
v -0.088114015758038 1.131000041961670 0.096389159560204
v -0.091275274753571 1.132000088691711 0.096470884978771
v -0.094524994492531 1.134000062942505 0.096637688577175
```



Felipe3.obj

