Data4Good Hackathon Vienna 2019

April 27-28, 2019

VDSG
VIENNA DATA SCIENCE GROUP

Define the Problem

Improve democracy by greater transparency into citizen complaints

Hackathon Objective:

- Prototype an analytical map of complaints to the city of Buenos Aires

- Data set of 900K citizen complains coming in through multiple channels

- Data static in CSV file. Highly structured but hard to visualize

- Mapping

  - Find functional representations of the data on geographic maps
  - Perform Geo-analytics on the data (w/ GeoPandas)
  - Generate maps as standalone web pages (w/ Folium)

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Goals & Accomplishments

Data set of close to 900K citizen complaints coming in through multiple channels

Static data in highly structured CSV file. Hard to visualize.

Dataexploration

- ○ Explore datasets
- ○ Data augmentation

Mapping

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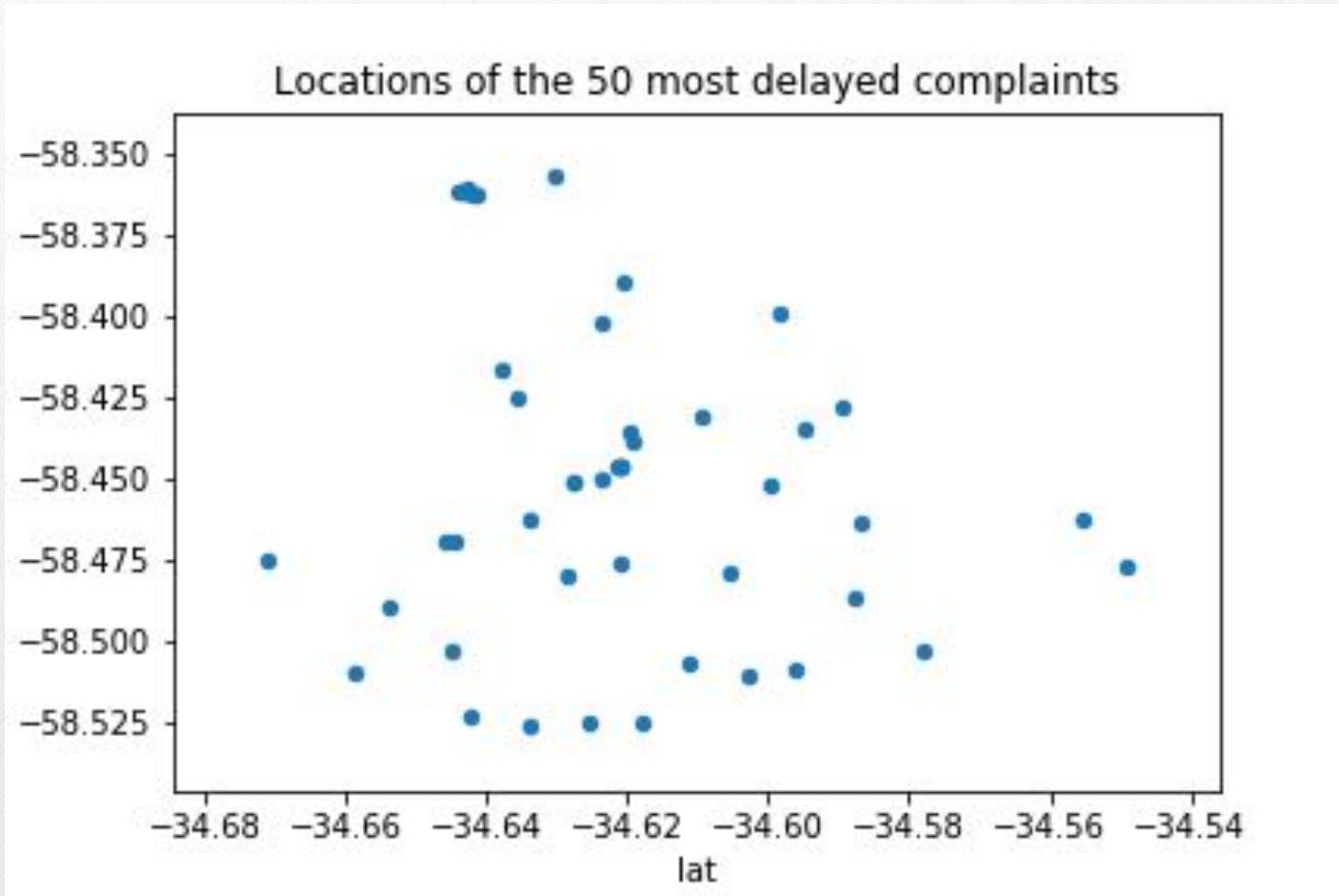
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Challenges Encountered

- Environmental issues -- set-up under WIndows (but not only)

- Figuring out structure and milestones - all of the team came in "cold"

- Git branching and synchronization across the team members

- Understanding content of the data provided

- Understanding external data sets that might be relevant

- Geopandas -- Py library for processing of "near-ness"

- Folium -- Py visualization library for creating maps

- Determining objective(s) -- lots of brainstorming

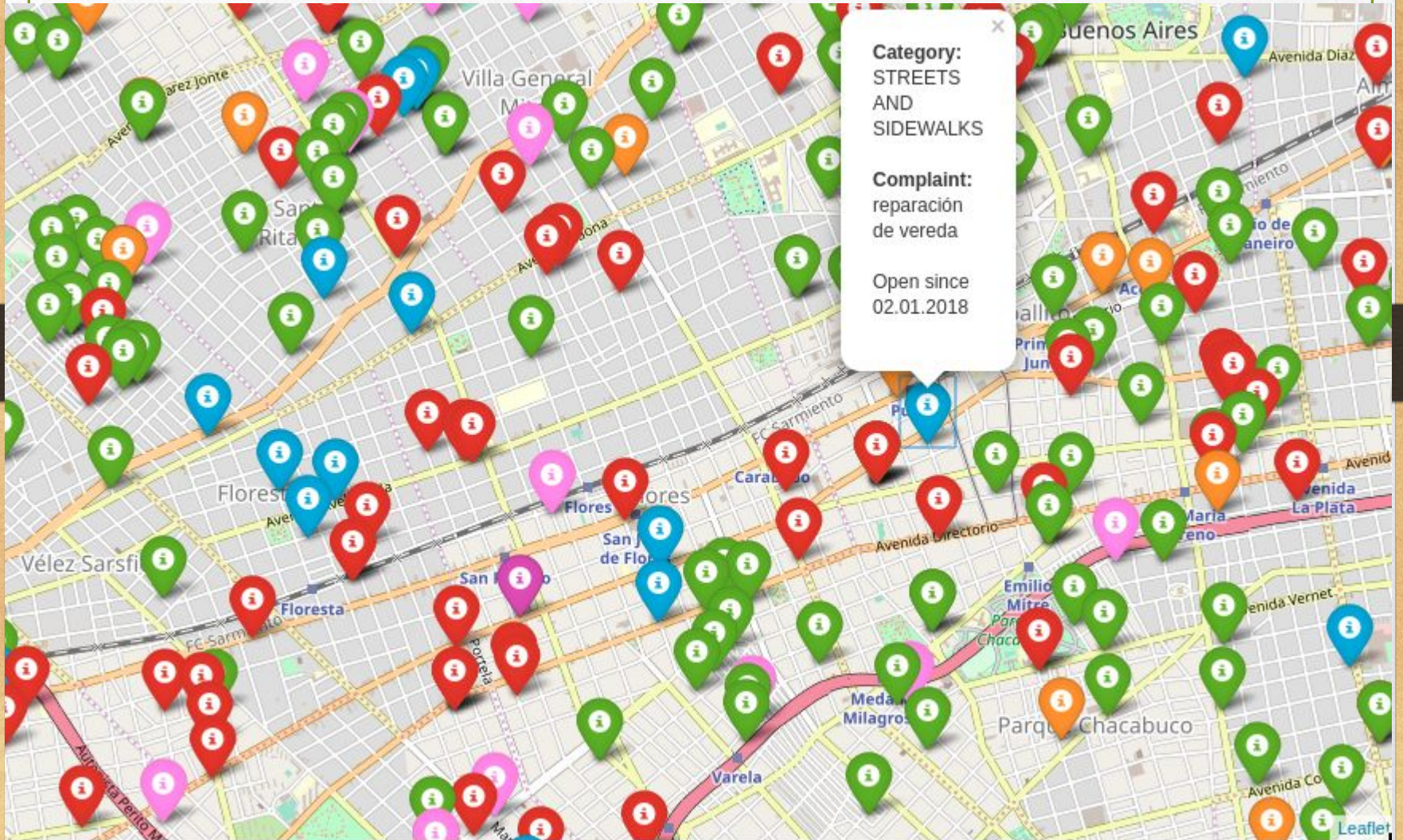- Implementation glitches; debugging

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Location of longest open complaints
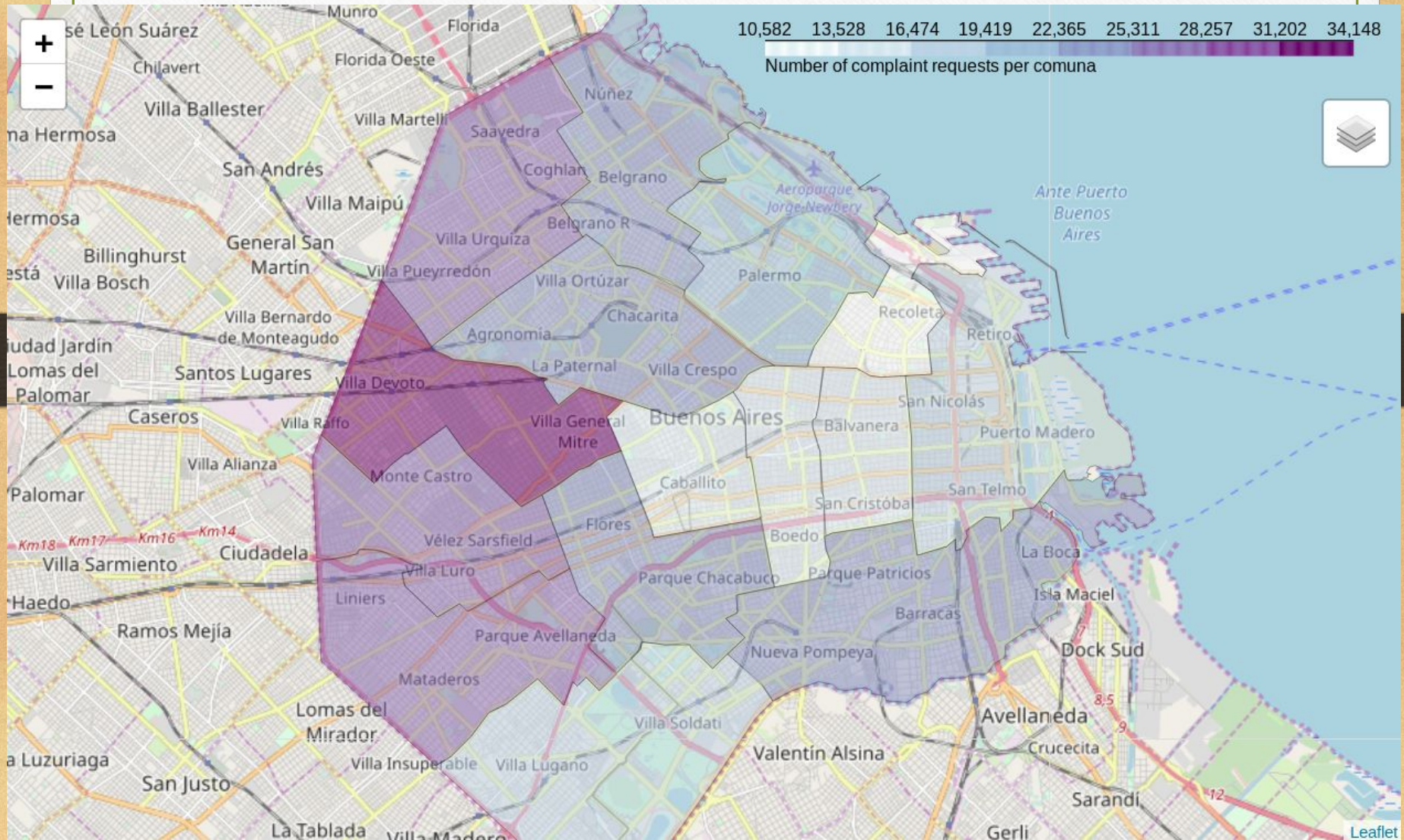

Locations of the 50 most delayed complaints

Complaints by category --
green - trash, pink - lighting, orange - trees&greenspaces

The darker the color, the more complaints

The Road Ahead

- Better visualization of different categories and subcategories of complaints

- More interactive time series analysis

- Better discrimination of the complaints in terms of their importance, quality of the data, and city official's response.

- Syntheses with other available open urban data sets

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The Team

DS Lead Thomas Treml

Assistant Lead Scott Fertig

NGO Partner Victor Perez

Hacker Team: Martin Marcinko, Jasmina Kadic, Jelena Milosevic, Samuel Melkovic

Expert Advice from Anita Graser

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