Twitter Pluviometer

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Overview

1.

Clouds

Cloud formation and precipitation

2.

Rain impact

Rain affects the city and basins

3.

Hydrological Impacts

The rain causes hydrological impacts

4.

Blocked Road

Roads blocked due to accumulation of water on site

5.

Data Base

Recording the start and end time of the interdiction of roads in a database

6.

Data processing

Data collection, processing and analysis

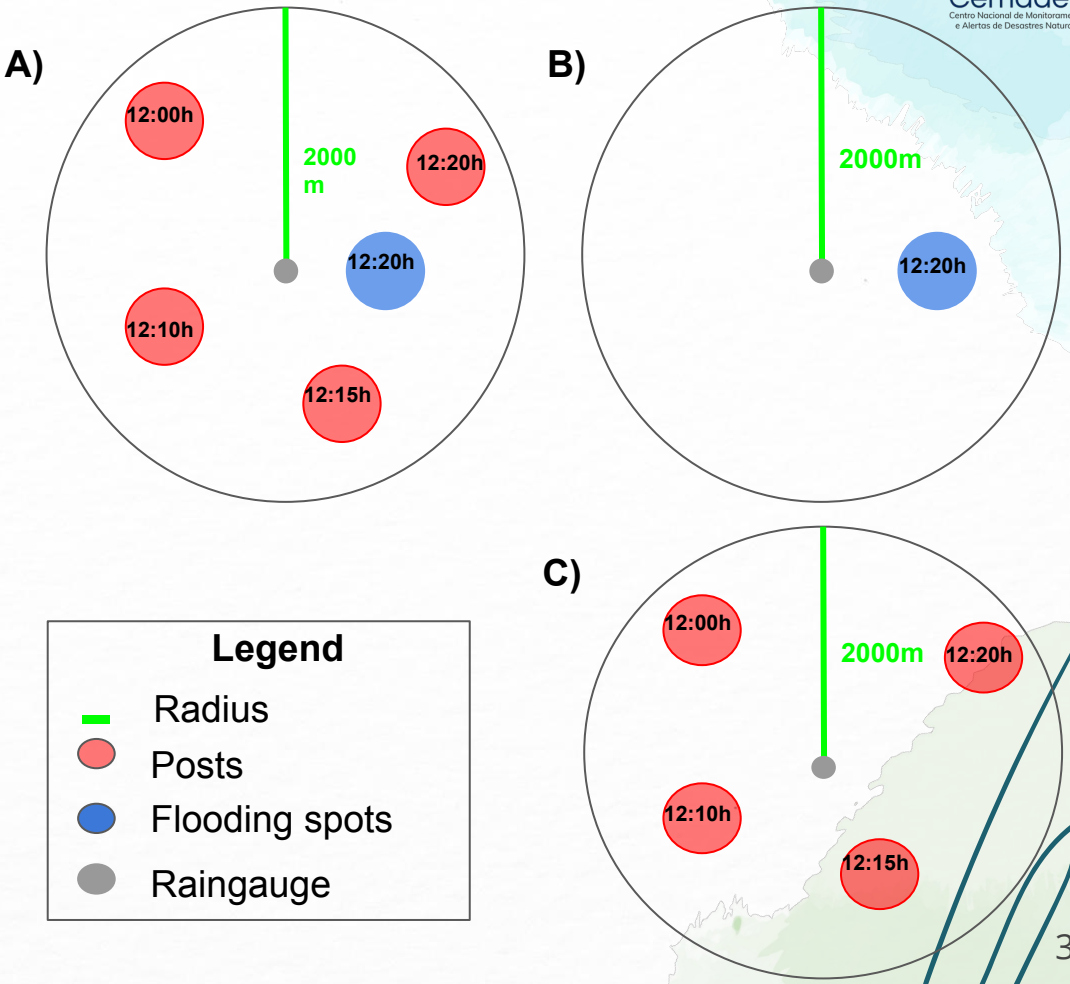
Motivation

- New solutions to anticipate alerts of flood;
- The increasing incidence of flooding cases due to climate change;

Literature

- Determining flooded areas using crowd sensing data and weather radar precipitation: a case study in Brazil. HORITA, Flávio; BRESSIANI, Danielle; PALMA, Gilca; ALBUQUERQUE, João.P. 2018

Materials and methods



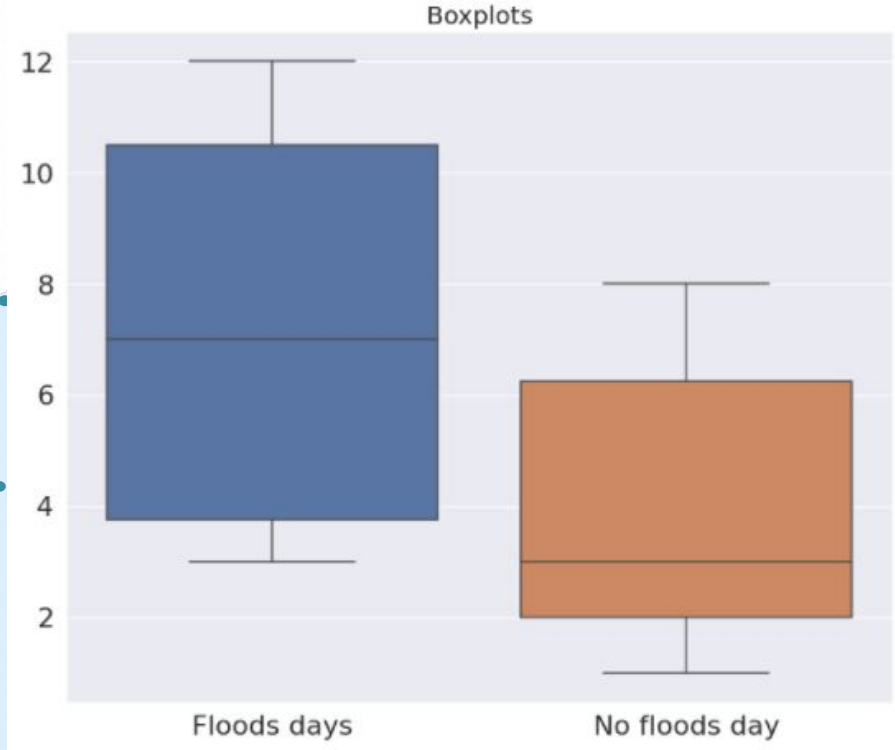
This work

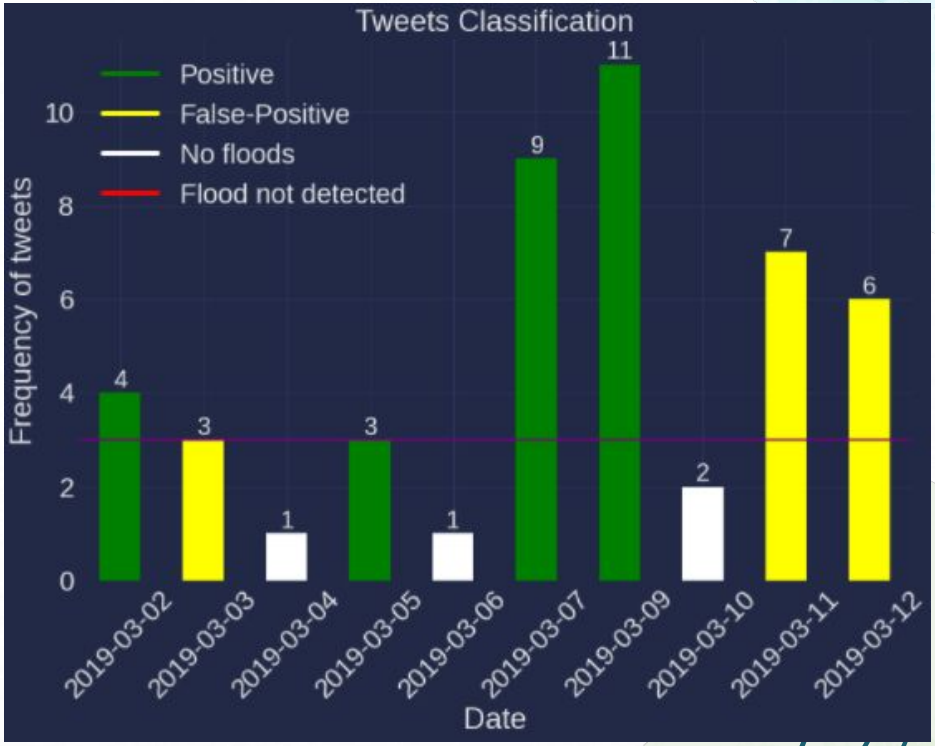
Research Topic: Twitter rain gauge, analyze the relation between rainfall data and tweets for flood forecasting

Objective: Process and analyze rainfall and twitter data to predict floods

Scientific hypothesis: It is possible to find a possible relation between crowdsensing and rainfall data to structure a way to detect floods

Results


Boxplots
12
10
8
6
4
2
Floods days
No floods day


Tweets Classification
Positive
False-Positive
No floods
Flood not detected
Frequency of tweets
0
2
4
6
8
10
4
3
1
3
1
9
11
2
7
6
2019-03-02
2019-03-03
2019-03-04
2019-03-05
2019-03-06
2019-03-07
2019-03-09
2019-03-10
2019-03-11
2019-03-12
Date

THANKS

Do you have any questions?

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