RASD

Carlo Dell'Acqua, Adriana Ferrari, Angelica Sofia Valeriani

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3.1 Functional Requirements

3.1.1 Allow a user to send pictures about street and parking violations

- A user can submit a picture to the system whenever they see a street violation

- SafeStreets analyses the image to read the licence plait of the vehicle

- The user can manually attach the licence plait to the image, to help the system with its validation

- The user must provide the type of violation, either selecting it from a list or manually typing it if it is not already in the system

- The user can help localising the violation by inserting the name of the street where it occurred

3.1.2 Validation of reported violations

- Whenever a violation is reported by a user, it is sent to a random group of k SafeStreets users

- Users who receive the notification about this approval process are then asked to approve or reject the report

- The report is validated if and only if the algebraic sum of approvals (+1) and rejection (-1) is at least v

3.1.3 Allow a user to see the areas where a violation is more likely to happen

- SafeStreets can aggregate data inputted by users to show relevant statistics about the frequency of street violations

- Users can see how many violations usually happen in their neighbourhood, in their current location or in an area of their choice

- A user has access to the type and amount of violations that happened

3.1.4 Allow authorities to see data about violations and who committed them

- Authorities can access all data about violations that a standard user can access

- Authorities also have access to more specific data about who committed a violation, like the licence plait of the car or how many infractions have been associated to a specific car

3.1.5 Allow any citizen to become a user by providing a document

- A citizen can register to SafeStreets by providing their ID number

- The system must allow a user to register with an email and a password, that will be asked every time they log in

3.1.6 Allow authorities to register with a special user profile

- Authorities must first register as citizens

- A standard user profile can be upgraded to authority profile if it is verified by the system

- To obtain privileged access, the user must provide a valid document that proves their authority status

3.1.7 Unsafe Areas Identification

- SafeStreets can cross information from different sources to identify potentially unsafe areas

- SafeStreets may be integrated with a public service, offered by the municipality, that provides such information

- Once identified, SafeStreets can suggest possible interventions to prevent accidents

3.1.8 Traffic Ticket Generation

- SafeStreets can generate tickets for traffic violations reported from registered users

- The information is kept safe and intact through the chain of custody, from the end user to the local police officer issuing the tickets

Chapter 4

Formal using Alloy

Chapter 5

Effort spent

Carlo Dell'Acqua

Task	Time spent (hours)
Project setup	2

Adriana Ferrari

Task	Time spent (hours)
Project setup	2
Functional requirements	1

Angelica Sofia Valeriani

Task	Time spent (hours)

Bibliography