

# Comparison of different Features Detectors and Descriptors in the Cut-Copy Forgery scenario

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CSI 445 - Digital Image Forensics

# Introduction

- Social Media (Twitter, Facebook, Youtube, and the blogosphere)



- Can we extract crime information from the social media?

- Crowdsourcing crime visualization

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  - Crime information from the social media

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# Applications

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- Safety Routing

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  - Based on crime information provide a safety routing for one place to another



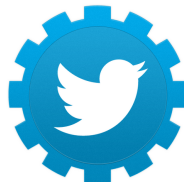
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- Crime Alert
  - Panic Button alerts a new crime based on GPS information
  - A espace safety route is provided to the user
  - The police can be notified

- 1 Crawl tweets from Twitter



# Social Media Crime Information Extraction

- 1 Crawl tweets from Twitter
- 2 Classify tweets in related to crime or not



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- 2 Classify tweets in related to crime or not
- 3 Determine the type of crime



# Social Media Crime Information Extraction

- ① Crawl tweets from Twitter
- ② Classify tweets in related to crime or not
- ③ Determine the type of crime
- ④ Extract Location of tweet





# Crawl tweets from Twitter

- Streaming API
  - New York city region
  - Keywords related to crime

# Classification of tweets

- Training Data
  - 14094 tweets manually labeled (5837 positives, 8257 negatives)
  - Types of Crimes:
    - Robbery, Shooting, Theft, Assault
    - Burglary, Vandalism, Arson, Drug Possession

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- Classifier of type of crimes Statistics
  - Precision: 0.92 (+/- 0.01)
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# Extract Location of Tweet's text

- Preprocessing

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  - Lowercase

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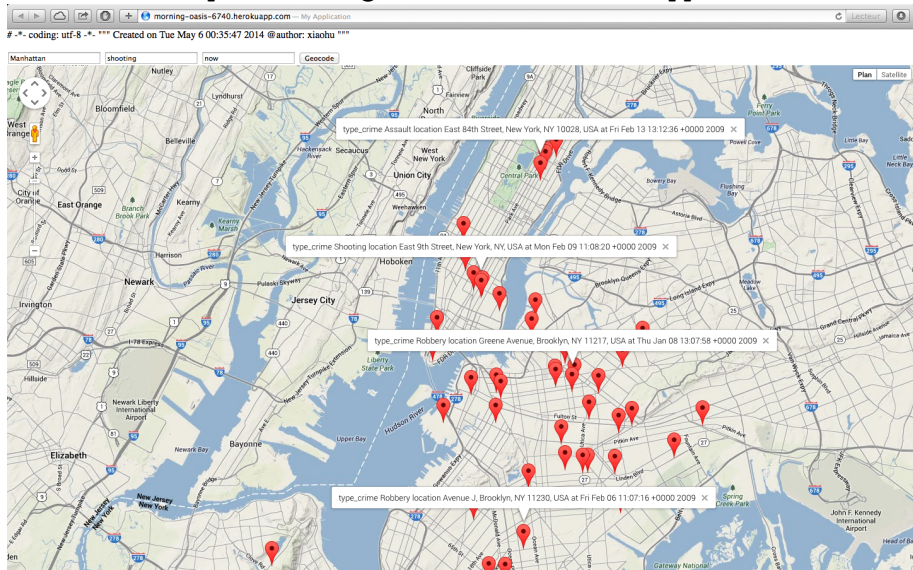
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- Match street addresses (Begin of address)

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  - Lowercase
  - Remove punctuation
  - Apply alias dictionary
- Match street addresses (Begin of address)
- Match state names (End of address)

# Web App Interface

<http://morning-oasis-6740.herokuapp.com>



# Questions ?

