

# Crime Density using News Article Analysis

**CRIME SCENE**

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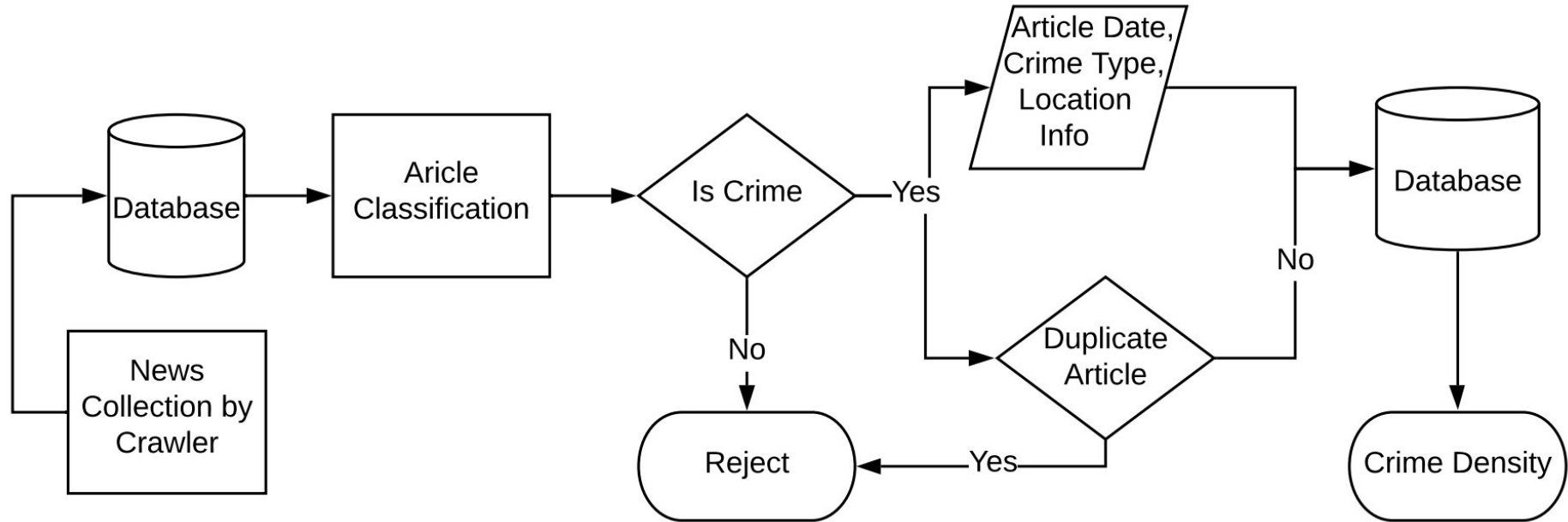


# Problem Statement

- Main objective:
  - Generate a heat map
  - Based on crime rate
- Use Case:
  - Finding safest route/place
  - Dynamically organising police force
  - Predicting the future occurrence of crime



## Last semester work



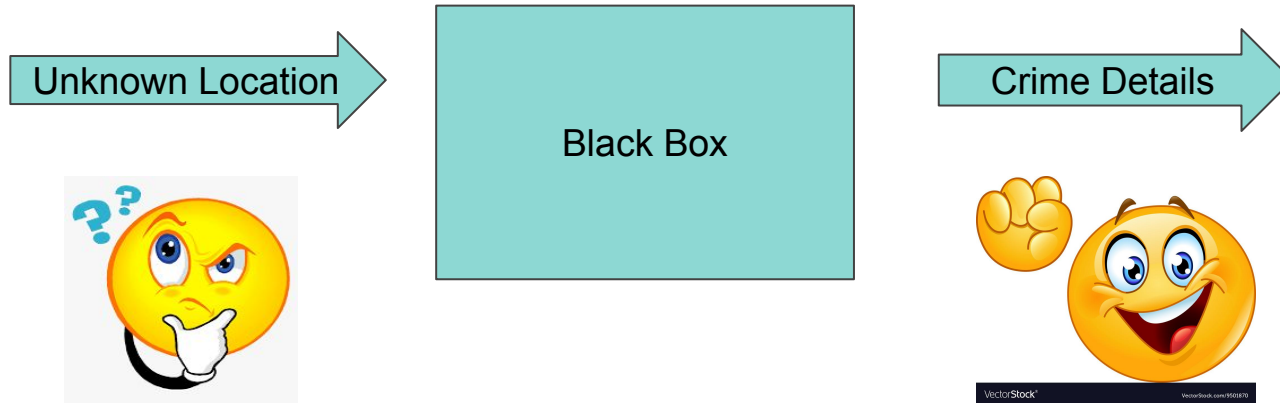


# Changes After The Paper (New Objectives)

- I. Crime Score of unknown location
- II. Updates in the database
- III. Duplicate Detection

# New objective (I)

- Crime Score information for unknown locations
  - We need to create this black box





## Database Updates - (II)

- News Articles
  - Duplicate Reference
  - Analysed Flag
  - Entities
- Location Info
  - Last Update Date
- Max Crime Score - singleton table



# Location

- APIs
  - LocationIQ
  - Bing SpellChecker
- Handling Multiple Locations
- Ignoring States and Cities
- Geo Coordinates of the locations



# Crime Score

- Normalization
- Update periodically
- Unknown Location
  - Gaussian with mean = 0 and variance = 10 KM
  - Effective radius = 3 times sigma





# Duplicate Detection - (III)

- Challenges
  - Time Span - how many news to compare
  - Speed - fast duplicate checking



# Interface

- Flask
  - Input - Location
  - Output - Crime Score
- [http://172.26.5.254:5000/location\\_info?name=bandra](http://172.26.5.254:5000/location_info?name=bandra)



# Future Work

- Normalize Crime Score
  - Country, State and City wise
- Periodically freeze the crime score
  - To generate the crime score graph over time
- Improve the Interface
  - More intuitive and easy to interpret data

# Questions and Answers



*Thanks!*