Project Proposal Data Analytics

Project Title: Predicting crime rate in Chicago city

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Domain: Crime

Project Description:

We are going to analysis the data that is related to crime in Chicago city from 2001 to present which is extracted from Chicago police department. Analyzing frequent crime patterns and predicting crime type which is going to happen next at specific location at particular time. Our project consists of keywords like crime type, algorithms, time and location.

Project data section:

Our dataset that is crimes_2001_to_present consists of attributes like:

- Crime type
- Description
- Location
- Arrest
- Year
- Updated on
- Date and time

Project problem section:

These days crime rate was increasing rapidly so our main aim is to predict most occurring crime type which would help Chicago police department to focus on that particular crime type and make some measures to stop it. We will do pre-processing of data and analyze it.

- There are various crimes taking place in the city so we want to analysis the crime type that occurred most in 2001 to present year and find if it is increased or decreased, and during which hour of the day it is very high.
- We will classify the five most crime zones based on how the crime rate in one place is affecting the neighborhood zones and will visualize the data.
- And we will work on predicting which type of criminal is arrested, if he was arrested when the case was updated.

Technical approach section: We will follow steps like

- Data cleaning
- Cluster algorithm

- Apriori algorithm
- Histogram
- classifications

Milestone section:

Milestone 1: Selecting the domain for our project, dataset on which we will work, giving project proposal.

Milestone 2: Removing the noise and disturbances from the dataset, processing the data, deciding the algorithms and tools to make our analysis.

Milestone 3: Working on tools to actually reach our goals of prediction as we stated above.

References section:

1. https://catalog.data.gov/dataset/crimes-2001-to-present-398a4
2. http://www.pentaho.com/download
3. http://www.cs.waikato.ac.nz/ml/weka/downloading.html
4. http://www.tableau.com/download
5. https://arxiv.org/ftp/arxiv/papers/1508/1508.02050.pdf