NEWS AND GUN VIOLENCE: BIAS IN THE WRITING?

By Thomas Plapinger

Agenda

- Problem Statement

- Definition of Mass Shootings

- Description of Data and Exploratory Data Analysis

- Methodology

- Results

- Recommendations

- Moving Forward

Problem Statement

- Are the words used by the New York Times when covering mass shootings directly related to the ethnicity of the shooter(s)?

- If they are or aren't, what words arethe strongest indicators of a particular ethnicity.

Definition of a Mass Shooting

- No Official Definition
- Commonly used definition
  - A Shooting where four or more people are indiscriminately(excluding gang and terrorist related shootings), not including the perpetrator(s), are killed or wounded.
- Issue – Misclassification of Events

Description of Data Sources

- Stanford Library Mass Shootings in America Library
  - Begun in 2012
  - Focus on 1970-March 2016
- New York Times Articles
  - Total Articles 1053 Articles
  - Day of Shooting and 6 Days Following

Incidents By Year

1966
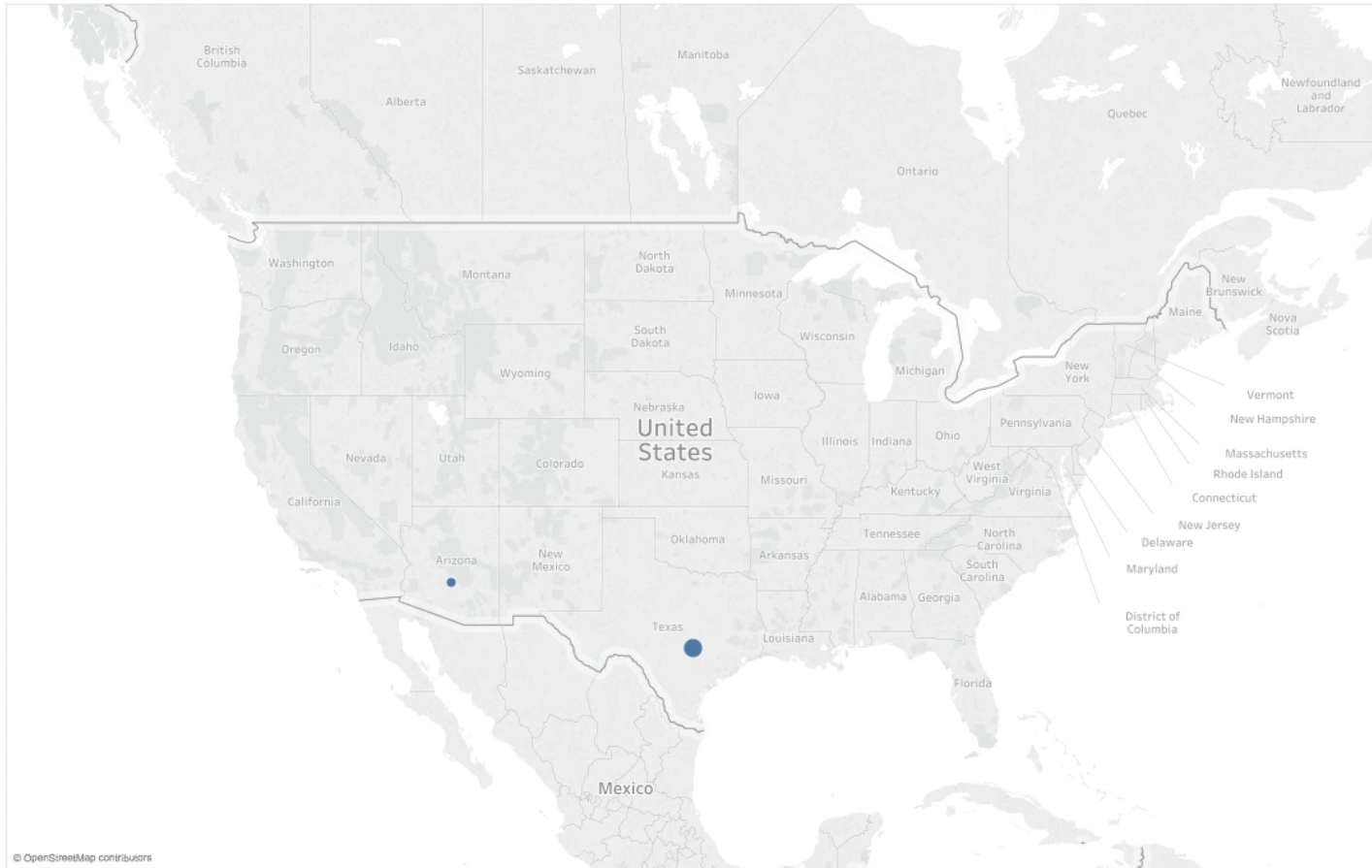
Incidents by Year (cont.)

Date
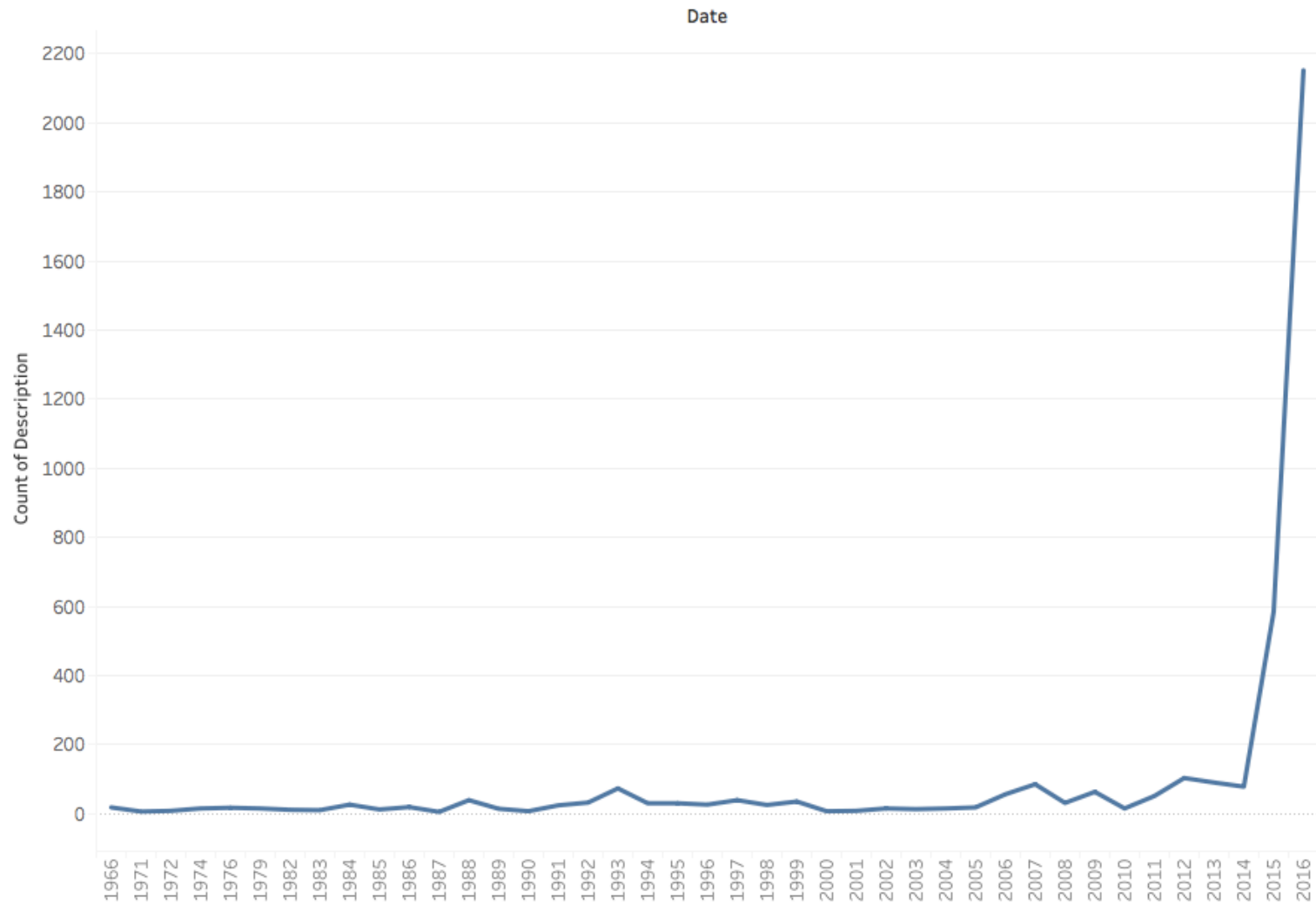
Perpetrators by Race 1970-2016
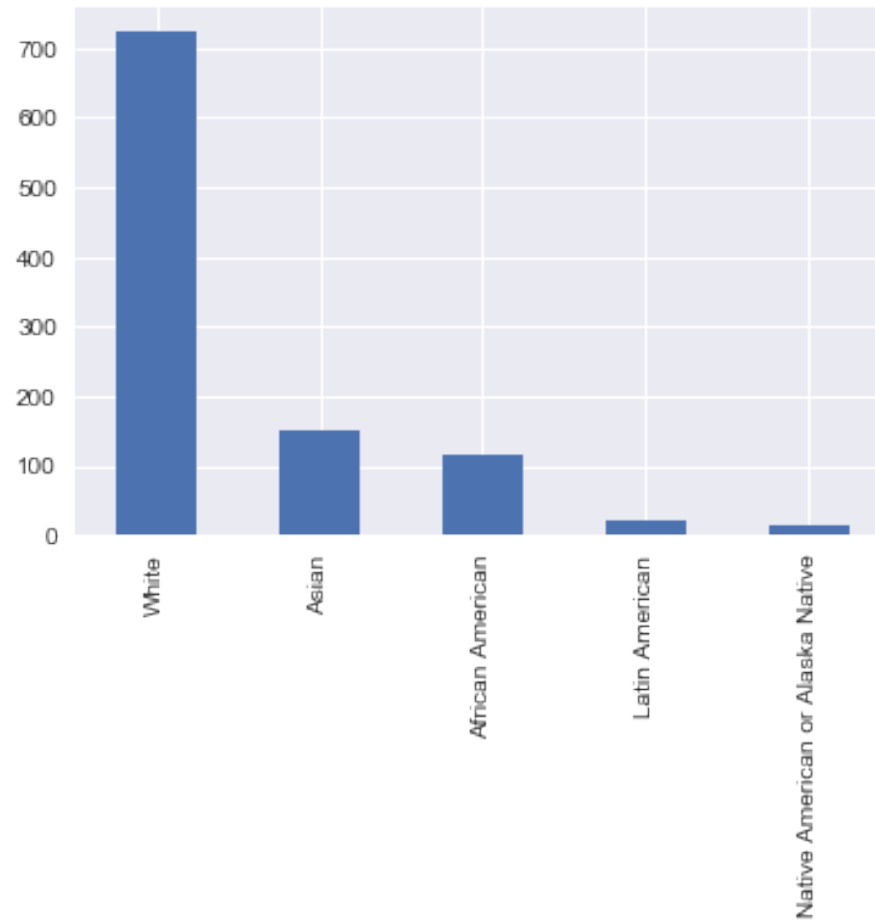
Methodology

- Compiled Data frame with:
  - Incident Name, Article, Title, Shooter Race
- CountVecotorizer and Word Preprocessing
  - General StopWords and Custom list
- Random Forest Classification Model
  - For Top 1500 Occurring Words
  - Generated General Race Important Features
  - Generated Additional Feature Importance's by Race
  - Cross Validation Score – 71%

Results – General List

- Top Words Indicating to Shooter Race
  - Class
  - Reservation
  - Crime
  - Response
  - Professor
  - Mental
  - Attempted
  - Least
  - Specialist
  - Another
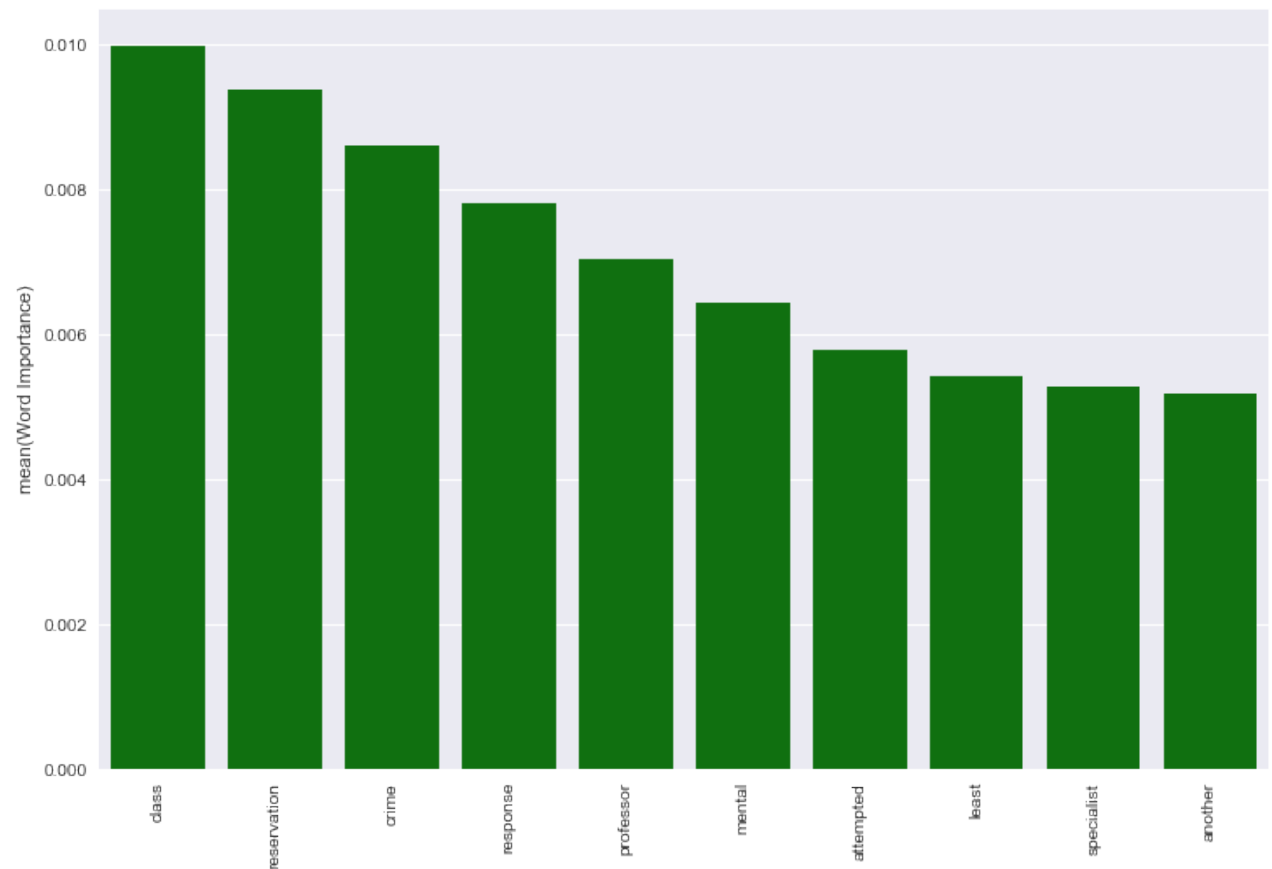
Greatest Indicators of Perpetrators Race

White	African-American	Asian	Native American or Alaska Native	Latin American
Dormitory	**Crime**	Dormitory	**Reservation**	**Specialist**
Professor	Passenger	Class	**Indian**	**Immigrant**
Class	Hearing	**Foreign**	Fit	Gathered
Engineering	Avenue	NBC	**Nazi**	Agency
NBC	Player	Fear	Teacher	Request
Injured	**Minority**	**Islamic**	Grandfather	**Military**
Student	**Officer**	**Terrorist**	Posted	Soldier
Immigrant	Waiting	Professor	Study	People
Reservation	Period	Mass	Posting	Chief
Shut	Financial	Terrorism	Sergeant	Murderer

| Cross-Val Score	.72	.886	.861	.986	.981

Recommendations and Deductions

- New York Times Uses Different Words Depending on Race

- Some Racially Charged Words Used, but due to Race Classification Errors There is noClear Evidence of Bias Towards Particular Race

- Further Study is Needed

Next Steps

- Gather More Data From
  - Local Newspaper from Incident Location
  - More National Newspapers from different regions
  - Newspapers with diverse political opinions
  - Online news sources
- Better Racial Distinctions for Latin American and Asians
- Coverage of Other Types of Incidents

Questions?
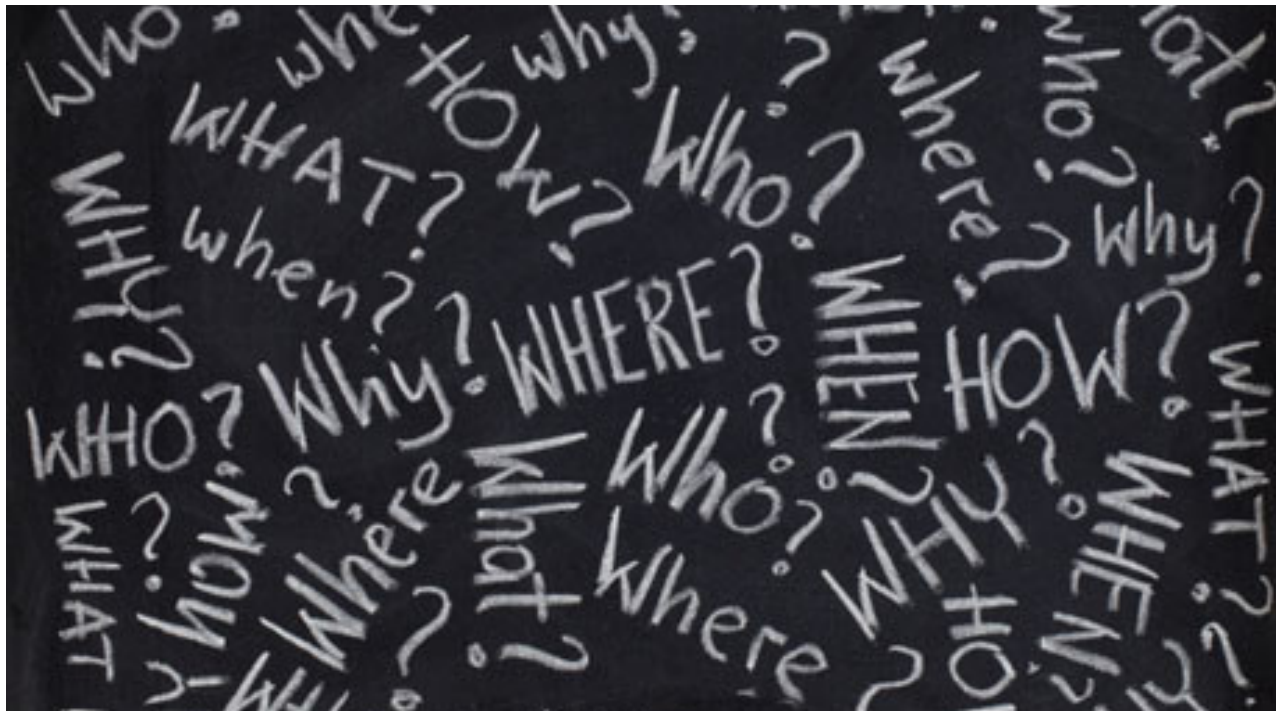
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