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Design of an interactive data analysis tool

Visualization Practical Work

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# Problem Characterization in the Application Comain

Violent encounters with police represent a significant cause of morbidity and mortality in the USA [1]. And, over the past five years there has been no reduction in the racial disparity in fatal police shooting victims despite increased use of body cameras and closer media scrutiny, according to a new report by researchers at Yale and the University of Pennsylvania [2].

In 2015, *The Washington Post* began to log every fatal shooting by an on-duty police officer in the United States. In five years, more than 5,000 thousand shootings recorded [3]. The data used in this project was obtained from Kaggle [4]. However, the selected dataset is a preprocessed version to the *The Washington Post*'s dataset [3].

# Data and Task Abstractions

## Data Abstractions

## Task Abstractions

# Interaction and visual encoding

# Algorithmic implementation

# Results

# Conclusion

# References

[1] F. Edwards, H. Lee, and M. Esposito, “Risk of being killed by police use of force in the United States by age, race–ethnicity, and sex,” *Proc. Natl. Acad. Sci. U. S. A.*, vol. 116, no. 34, pp. 16793–16798, Aug. 2019.

[2] E. Lett, E. N. Asabor, T. Corbin, and D. Boatright, “Racial inequity in fatal US police shootings, 2015-2020,” *J. Epidemiol. Community Health*, Oct. 2020.

[3] “Police shootings database 2015-2021 - Washington Post.” [Online]. Available: https://www.washingtonpost.com/graphics/investigations/police-shootings-database/. [Accessed: 21-Jan-2021].

[4] “US Police Shootings | Kaggle.” [Online]. Available: https://www.kaggle.com/ahsen1330/us-police-shootings/notebooks. [Accessed: 21-Jan-2021].

# Appendix 1. How to run the code