AR: Know where you are, know where you're safe

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Background

As a single woman in Los Angeles, personal safety is one of my highest priorities, and it can be difficult to determine the safety of a neighborhood. My project aims to create an AR program that can identify the neighborhood a user is in and the relevant crime statistics for that neighborhood. However, there are many neighborhoods in Los Angeles that are discriminated against. So I do not want to call any one neighborhood dangerous, and instead just display the crime statistics and let the user choose how to proceed.

Research Questions

To what extent can open crime data be used to inform women of their surrounding city environment, whilst eliminating any bias?

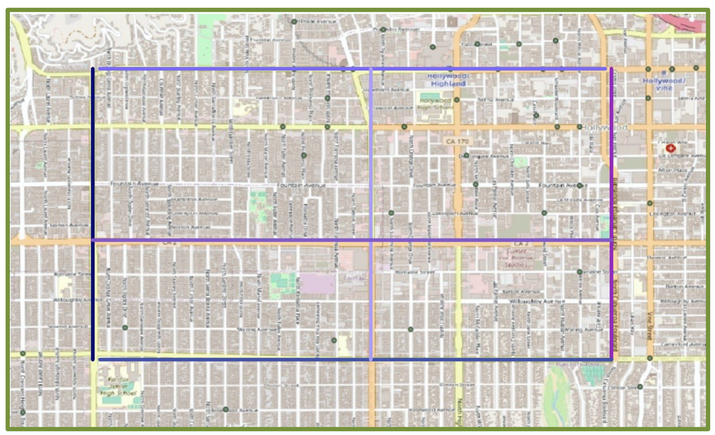

Figure 2: qGIS map of region selected for prototype with data points

Figure 1: This flowchart shows how all the programs used work together as explain in Computation Details

Computational Details

The AR interface to crime data had several components: exploring the data geographically (qGIS), filtering and cleaning the data (python), creation of the AR interface on an iPhone (Unity game-engine, ARKit4, Xcode)

Future Work

This project could be an amazing tool for women and single travelers moving to Los Angeles. It can provide a sense of safety and confidence for women. The next step of this project would be finalizing the implementation into Unity. Then, I could test the AR on the street and see what makes sense for an interface. There may be some things I would like to add and some thing that do not work with the interface but can only find that out through live testing. After those two tasks are completed, the area of study could be expanded and eventually the project would cover all of Los Angeles.

References

https://data.lacity.org/Public-Safety/Crime-Data-from-2020-to-Present/2nrs-mtv8

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