

Thesis Project Portfolio

High Utilizers of the Albemarle and Charlottesville Criminal Justice System

(Technical Report)

How Do Groups React to Controversies in Predictive Policing Softwares and What Lessons Can be Learnt from Understanding those Controversies

(STS Research Paper)

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Executive Summary

Both the technical and STS projects focus on the general area of issues in the criminal justice system. Both projects deal with different areas in criminal justice, and the overarching research question can be generalized to: what are areas in criminal justice where there are problems and what steps can be taken to mitigate those problems? My technical project focuses on high utilizers, individuals who go through the criminal justice system very often due to high recidivism rates. On the other hand, the STS research project deals with the usage of predictive policing models. The STS research project stems from the interest I gained in the criminal justice system from my work with my research team for the technical project.

In the technical project, my capstone research team and I sought to answer the questions: what areas of Charlottesville's criminal justice system are under strain from high utilizers going through the system and what steps can be taken to reduce the strain on the system? In particular, our capstone team focused on utilization of the jail. We first identified areas of the system with high-utilization, and then, we focused on creating different intervention methods that would help with the resource strain. Our capstone team obtained data for the project from stakeholders in two forms: general datasets and specialized knowledge. By combining insights gained from analysing the datasets and from the expertise of our stakeholders, we were able to identify that a majority of pressure on the system came from high utilizers having to go through long and complicated booking processes every single time after being booked in. This is significant because we found that high utilizers are rebooked into jail very often, and their jail stays are typically extremely short. Our recommendation for this issue involved streamlining booking processes for individuals who were previously booked within a short time period to decrease overall system strain. We also discovered that high utilizers are often rebooked for the same crimes after the initial booking, so we recommended that our stakeholders provide better services

for individuals coming out of jail so that they do not reoffend for the same crimes.

For the STS project, I conducted a case study on PredPol, a predictive policing algorithm used by the LAPD in the 2010s, to answer the following question: how do poorly designed policing algorithms become controversial and how do societal groups react to those controversies as they start to emerge? In order to answer this question, timeline related data was collected to understand how controversies emerged after PredPol's introduction, as well as what policies were introduced as a reaction to those controversies. An interesting story emerged from the data collected. Prior to PredPol and its controversies, there weren't any policies or measures in place to moderate predictive policing tools or to protect people from its effects. Rather than taking precautionary measures, lawmakers now have to take reactionary measures to manage the effects of predictive policing tools. The story of PredPol serves as a cautionary tale for lawmakers, police, engineers, and community members. Each group should be more cautious of the promises made by predictive tools and be more aware of how it can have widespread effects among their own group and other groups.

Both the technical and STS research projects turned out to be fruitful. For the technical project, my team and I discovered new things about the system in relation to high-utilizers, and according to our stakeholders, our findings were both helpful and actionable. For next steps on our technical research, there are many different directions future researchers could go. We focused on the jail booking process, which is just a small part of the system. Future researchers could expand our research ideas to other parts of the criminal justice system in Charlottesville. They could also cross reference our current list of jail high utilizers with high utilizers of other parts of the system to see if there is overlap, and if there are overlaps, they can investigate further to understand factors leading to them becoming high utilizers in multiple parts of the system. For

the STS research project, it was successful, but not to the degree that I would have liked it to be. It was disappointing to see that for the most part, policies have only started to be introduced. For future researchers, they could investigate current predictive policing algorithms to see if PredPol's controversies impacted the way that the new algorithms present themselves or operate.