Thesis Project Portfolio

Mobile App Development: Suspect Tracking Databases for Police Departments

(Technical Report)

Analysis of Bias in Crime Prediction Algorithms

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

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Table of Contents

Sociotechnical Synthesis

My capstone research paper dives into my internship experience during the summer of 2021 and the mobile application I helped design. This mobile app was designed to help Florida county police departments keep track of ex-convicts and suspects in their jurisdictions. The human and social dimensions of this technology need to be carefully considered as any bias in the making of this technology could lead to the marginalization of certain communities and advantages to others. In my STS Research paper, I will analyze a similar technology, predictive policing, using the theory of technological politics. Using the theory of technological politics to analyze case studies of predictive policing will help understand the implications of bias in any technology used to help the police. Through my STS research I believe I will discover reasons to be wary of bias when designing technology to be used by the police. The implication of both my capstone project and STS research together shows the importance of unbiased design when working with technology that affects entire communities and the law.