1167-00-134 **Nil-Jana Akpinar***, nakpinar@andrew.cmu.edu, and **Maria De-Arteaga** and **Alexandra Chouldechova**. *The effect of differential victim crime reporting on predictive policing systems.*

Police departments around the world have been experimenting with forms of place-based data-driven proactive policing for over two decades. Modern incarnations of such systems are commonly known as hot spot predictive policing. These systems predict where future crime is likely to concentrate such that police can allocate patrols to these areas and deter crime before it occurs. Previous research on fairness in predictive policing has concentrated on the feedback loops which occur when models are trained on discovered crime data, but has limited implications for models trained on victim crime reporting data. We demonstrate how differential victim crime reporting rates across geographical areas can lead to outcome disparities in common crime hot spot prediction models. Our analysis is based on a simulation patterned after district-level victimization and crime reporting survey data for Bogotá, Colombia. Our results suggest that differential crime reporting rates can lead to a displacement of predicted hotspots from high crime but low reporting areas to high or medium crime and high reporting areas. This may lead to misallocations both in the form of over-policing and under-policing. (Received March 03, 2021)