Undergraduate Research Program – 2015/2016

University of North Alabama

Title: KDE Crime Mapping in Mobile, Alabama

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Abstract

Criminologists are beginning to understand the implications that 'place' has on crime. Land use features are known to influence the flow of people as well as the flow of crime. The case study is the city of Mobile, Alabama where three types of crime (burglary, larceny, and motor vehicle theft) have been visualized using kernel density estimation. KDE mapping can show the locations of where crime is the highest and can be used to understand which land uses create the highest pulses of crime. The resulting maps showed that the highest concentration of crime of all categories was in the central business district where there are offices, bars, shopping centers, and parks. The relative amounts of the three individual crime types predictably fluctuated depending on the variable features of their locations.