

## IMPACTS OF PREDICTIVE TECHNOLOGIES

## COMPONENTS OF PREDICTIVE TECHNOLOGIES

- What is the tool predicting?
- What types of data are being used for prediction?
- What is the selection of data being used?
- What boundaries in space are being used to aggregate data?
  - What are the spatial impacts of the prediction?

How does space shape predictive technologies and how do the predictions impact communities in space?

Toolkit designed by:

*Shubhangi Gupta*

*PhD Student, Georgia Tech*

*Yanni Loukissas*

*Associate Professor, Georgia Tech*

## PREDICTION GOAL

What is the tool trying to predict? How does the prediction impact neighborhoods?

Why do we want to predict crime in space? Does it align with the public safety needs of various neighborhoods? How can predicting crime help neighborhoods? How can it harm neighborhoods? How does the act of labeling a space as a crime hotspot change the space? Is crime a feature of space? Why? What else is a feature of space that needs to be considered?

## DATA TYPE

What type of data is the tool using to make a prediction? How do historical and current discriminatory practices impact this type of data?

Does this data show spatial and temporal patterns that can help predict crime in space? Are these patterns a result of discriminatory practices? What other patterns exist in this type of data? What are the systems in place that lead to the collection of this data? How are these systems just or unjust?

## DATA SELECTION

What is the selection of data being used by the tool? How does the selection of data impact people and neighborhoods?

What data are included and what are not? Why? What are the data sources? What are the limits of the data sources? What information is difficult to quantify cannot be part of a data entry? How far back in time is the data from? How do spatial changes over time impact the crime predictions? Which spaces are impacted most by data selection processes?

## DATA AGGREGATION

What boundaries in space are being used to aggregate data?

How does the choice of spatial segregation impact neighborhoods? Is the crime predicted for a block, a street, a neighborhood? How is the data aggregated spatially? Do the spatial boundaries reinforce existing boundaries of segregation such as redlining, public transportation routes, etc? What new boundaries along crime do the aggregations form and who would these boundaries impact?

## PREDICTION IMPACTS

What are the real-world impacts of the tool? How are these impacts disproportionately distributed in space?

What makes the use of this tool successful? How is the success being evaluated? How does the knowledge of crime predictions impact the people who act on the predictions of the tool and their perspective of various spaces? How does it impact the spaces that are being evaluated by the tool? Which spaces suffer when the crime prediction is incorrect and how?