**Are Evictions Causing Poverty in Tennessee?**

Capstone Project Proposal 1.0, Nashville Software School, Data-Science Cohort 1

# Executive Summary

This Proposal will use the “state of the art” 2000 – 2017 eviction data from Princeton University’s Eviction Lab to explore its relationship to Tennessee data on poverty, and educational achievement. The primary objective is to determine whether or not, and to what extent The Eviction Labs findings can be reproduced or corroborated with Tennessee’s data. As a secondary objective, the project will seek to produce a model that can make effective and actionable predictions about future trends in TN evictions.

# Motivation

Recently the Eviction Lab (founded 2017) at Princeton University published the first ever (and thus, the most comprehensive) data set on the ‘Eviction Epidemic’ in the U.S. [[1]](#footnote-1) According to their findings there may be more evictions than there were foreclosures during the peak of the housing crisis. The resulting housing-insecurity is causing dramatic and adverse effects on families, economic mobility, mental health, and educational achievement. I am interested in taking a closer look at how much of their findings can be confirmed (and to what extent) when focusing on Tennessee in particular.

An even more ambitious driving question is: Can a model be used to give individuals advanced-warning if they are predicted to be at increased risk for eviction and its attendant harms.

# Data Questions

1. What longitudinal eviction trends are observable in TN?
   1. How do they break down at the county, and neighborhood levels?
      1. Are there any surprising or unexpected findings?
2. Can we observe data to support or detract from The Eviction Lab’s finding that women of color are at an increased risk of eviction?
   1. Can we observe differentiation across other demographic categories like race and income-level?
3. Can these Eviction trends be correlated to TN’s trends in education and poverty?
   1. Does the data suggest that Eviction is, as the Eviction Lab argues, *causing* poverty in TN?
4. What future trends in evictions, poverty, and educational achievement are predicted when fitting a machine learning model to this data?
   1. Can the model be used to evaluate the impacts of any currently proposed legislation or policies in TN’s legislature?
   2. Is there sufficient data to send advanced-notifications to individuals or communities that are predicted to be at a high-risk of eviction and its harmful consequences?

# Schedule: Jun 12 – Jul 24

1. Get the data: June 14 (2 days)
   1. Already downloaded the eviction data for TN from 2000 – 2017
   2. The educational achievement data is readily available at tn.gov/education/data/data-downloads.html
2. Clean & Explore the Data: June 21 (1 week)
   1. Eviction Data has already been cleaned and tidied by the Eviction Lab
   2. I am already familiar with the education data from tn.gov
3. Build and Deploy Statistical Results July 5 (2 weeks)
4. Build and Test Model to generate Predictions Jul 21 (2 weeks, 2 days)
5. Document/Pitch Result with a Presentation: Jul 24, 2018 (3 days)

# Data Sources

* tn.gov/education/data/data-downloads.html
* evictionlab.org

# Known Issues and Challenges

* Between 3-4% of the TN eviction data has been flagged by The Eviction Lab as underestimated.
  + These data points will have to be omitted or enhanced depending on what % of a given GEOID (polygon on a shape file map) they represent.
* There are privacy concerns about personally identifying data.
  + Even if time allows, and the data allows for a sufficiently effective model to predict the eviction-risk of an individual the model should only be tested and demonstrated using hypothetical-datasets so as not to risk releasing sensitive and private information.
* Tennessee’s data may not be as complete or uniform as The Eviction Lab’s data and may constrain the breadth and applicability of results and models.

1. This research uses data from The Eviction Lab at Princeton University, a project directed by Matthew Desmond and designed by Ashley Gromis, Lavar Edmonds, James Hendrickson, Katie Krywokulski, Lillian Leung, and Adam Porton. The Eviction Lab is funded by the JPB, Gates, and Ford Foundations as well as the Chan Zuckerberg Initiative. More information is found at evictionlab.org. [↑](#footnote-ref-1)