

Purple State Plunge: A Deep Dive into Pennsylvania's Cities

Joseph J. Kamedze III
Coursera Capstone Project

Introduction

The state of Pennsylvania is the 5th most populous state in the United States. Although the state's two largest cities lie on its east and west coasts, the state itself is dotted with smaller cities of varying sizes. Many of these cities were founded on the steel and coal industries, and because of the decline in these industries, have seen declines in their populations over the years. Others have managed to survive and even thrive as they have transitioned to meet the demands of the 21st century.

Business Problem

With the advent of the increased availability of location data and machine learning, someone who is interested in starting a business, investing in, or determining how to allocate funding for new business development in Pennsylvania can leverage these new capabilities to aid in the decision-making process. The purpose of this project is to explore the population growth trends among the cities of Pennsylvania between the years of 2010 and 2018 and leverage the data from Foursquare to cluster these cities together based on the cities' venues. This clustering can then be used to characterize growing and declining cities based on the most common venues in those cities, which can be used to determine where and how to direct business investments.