Data for Good Hackathon

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Challenge Statement

"Star House is planning to expand their presence to other cities to target the most in need populations such as homeless youth and have partnered with us to leverage data and analytics to find the right areas for their expansion."

The Question: Where should Star House expand to target in need populations of homeless youth?

The Answer: Athens

- **_Athens_** is our prime choice because:
    - Proximity to Hocking, Vinton, and Gallia, analyzed to be three of the counties with the highest disproportion of homeless youth compared to the youth population in Ohio.
    - Proximity to Meigs and Hocking, the counties that are among the highest average annual increase in sale price of houses
    - Expansion within state will provide ease in developing a new Star House location at a faster rate
    - Accessible to nearby counties through public transportation

Our Approach

- From all the data, we mainly used Housing inventory count by CoC , Point in time by CoC, growth annual income per county, yearly house prices, and geographic mapping

- Determined these key areas of interests because:
  - Helps determine youth homelessness needs
  - More susceptible to displacement from household due to rising house prices

- Ohio-centric approach
  - Proximity to Columbus improves services
  - Potential for increase in local government funding

Metric 1 - Homeless Youth by Total Population Ohio

- Important predictor used to build a center where youth homelessness rate is high

- Vinton and Hocking were among the top counties for homelessness rate

	State	Youth Homelessness rate
Vinton County	OH	0.301265
Wyandot County	OH	0.175307
Hocking County	OH	0.138361
Van Wert County	OH	0.130808
Gallia County	OH	0.122771

Youth Homlessness rate = Youths Homeless / Total Youths in county

https://www.census.gov/data/tables/time-series/demo/popest/2010s-counties-detail.html

Metric 2 - Lowest Income Earners in Ohio

- Counties with the lowest Income Earners (< $25K) in Ohio, adjusting by gross income and the lowest earners per county, sorted in descending order

- Washington County ranks at the top on low income earner

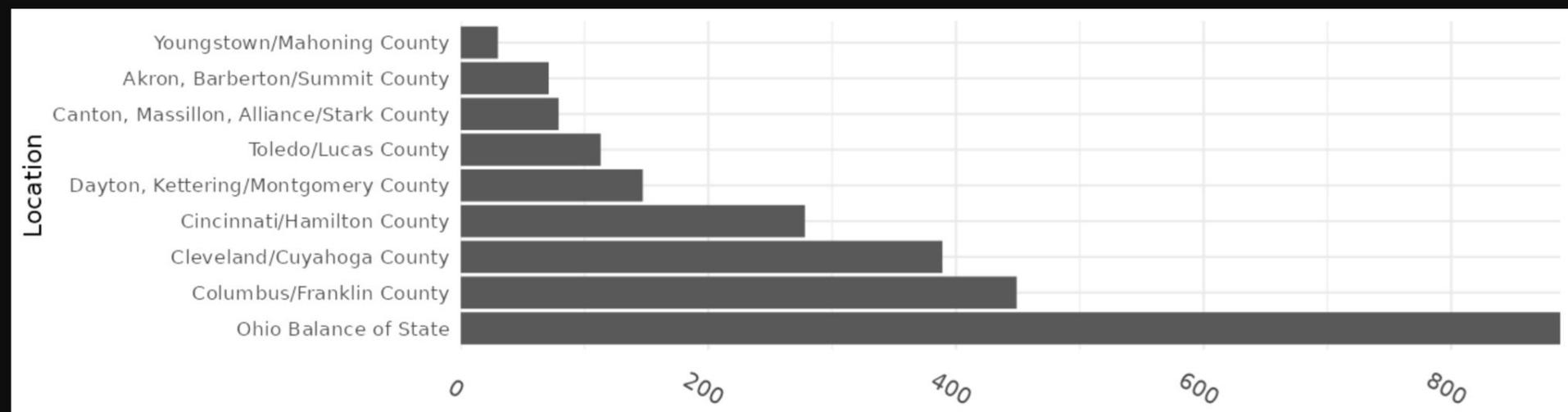| County	State
Auglaize County	OH
Washington County	OH
Morrow County	OH
Defiance County	OH
Mahoning County	OH
Montgomery County	OH
Ross County	OH
Allen County	OH
Vinton County	OH
Pike County	OH

Metric 3 - How many CoC's were in need of beds from homeless youth

County	CoC Name	Youth_beds	Homeless_youth_under_24	Left_over_beds
Cuyahoga County	Cleveland/Cuyahoga County CoC	141	359.0	-218.0
Franklin County	Columbus/Franklin County CoC	129	322.0	-193.0
Hamilton County	Cincinnati/Hamilton County CoC	67	228.0	-161.0
Lucas County	Toledo/Lucas County CoC	14	89.0	-75.0
Stark County	Canton, Massillon, Alliance/Stark County CoC	0	62.0	-62.0
Summit County	Akron, Barberton/Summit County CoC	23	51.0	-28.0
Mahoning County	Youngstown/Mahoning County CoC	10	28.0	-18.0
Montgomery County	Dayton, Kettering/Montgomery County CoC	86	77.0	9.0

Housing inventory count by CoC - 2021, Point in time by CoC - 2021

- Compares the available youth beds found in the housing inventory by the point in time count of the number of youth homeless

- From this we can conclude that most counties in Ohio are lacking sufficient beds for their youth homeless population
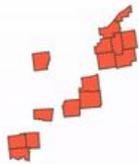
Link to - Shiny Star House

- Amount of Homelessness between counties through CoC data

Metric 4 - Yearly increase of Sale Price of houses

Annual Increase in House Price Index For a Single Family Home Compared to the Year Prior to, 1986 to 2021
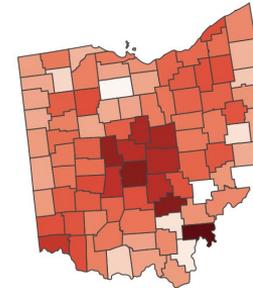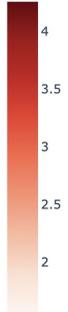

Average Annual Increase in House Price Index For a Single Family Home, 1986 - 2021

- Most statistically significant counties on the right – **Franklin**, **Meigs**, **Marysville**, and **Hocking**.
- https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx

Recommendation: Why we picked **Athens** as the County

- Multiple Other Nearby Areas with high youth homlessness rate
  - Vinton, Hocking, Gallia, Washington, Meigs

- Has a large substance abuse rate
  - ~1/3 homeless have alcohol and/or drug problems
  - ~20% have lifetime histories of drug
    - Potential cause of adolescent youth homelessness

- Easy Access to Public Transit in Surrounding Area
  - Athens Public Transit located between Hocking, Gallia, Vinton, and Washington
    - Athens On Demand provides door-to-door transportation service for county
  - Logan Public Transit passes through Hocking county from Logan

Why Athens?

- **Multiple Other Nearby Areas with high youth homlessness rate**
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- **Easy Access to Public Transit in Surrounding Area**
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- **Has a large substance abuse rate**

  33%
  - homeless have alcohol and/or drug problems

  20%
  - have lifetime histories of drug
    - Potential cause of adolescent youth homelessness

Next Steps

- Surveying local residents in potential locations to gather their opinions as well as potentially garner any local support

- Research primary services needed in potential locations to allocate the resources necessary to better serve those communities
  - Also look into services already provided in Athens and see how Star House would either complement or contrast those services

- Construct a more interactive model to calculate the best potential locations
  - Cost-Benefit Analysis of Potential States/Counties

- Expand analysis on metric 3 to include Hockin, Gallio, Vinton, and Washington