

## User Guide – Vast Challenge 2022 Economic Times

### 1. Home



Welcome to Vast Challenge 2022 Economic Times.



The home page allows the user to access the various tabs using the navigation bar above. The “Business”, “Financial” and “Employment” tabs contain the analysis of the various economic aspects of the City of Engagement, Ohio USA. The “About” tab contains the user guide, project proposal, poster and information about the site creators.

### 2. Business

#### 2.1 Customer – Revenue Analysis



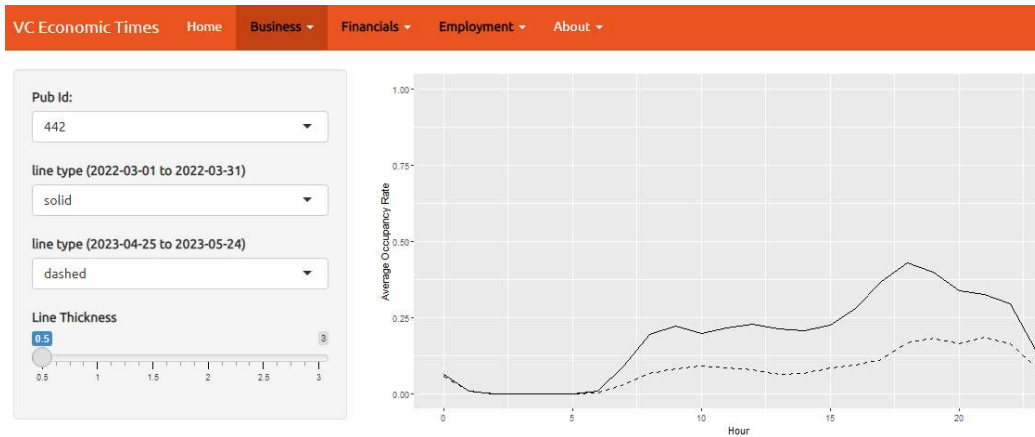
This scatter plot displays the number of customers vs the revenue earned per customer for each month. Each point represents a pub and the size of the point represents the total revenue earned.

It has two inputs on the left panel:

- Drop Down Selector for “Point Shape” for the user to modify the shape of the points.

- Slider Selector for “Month” for the user to visualise the customer and revenue data for various months.

## 2.2 Occupancy Rate Analysis



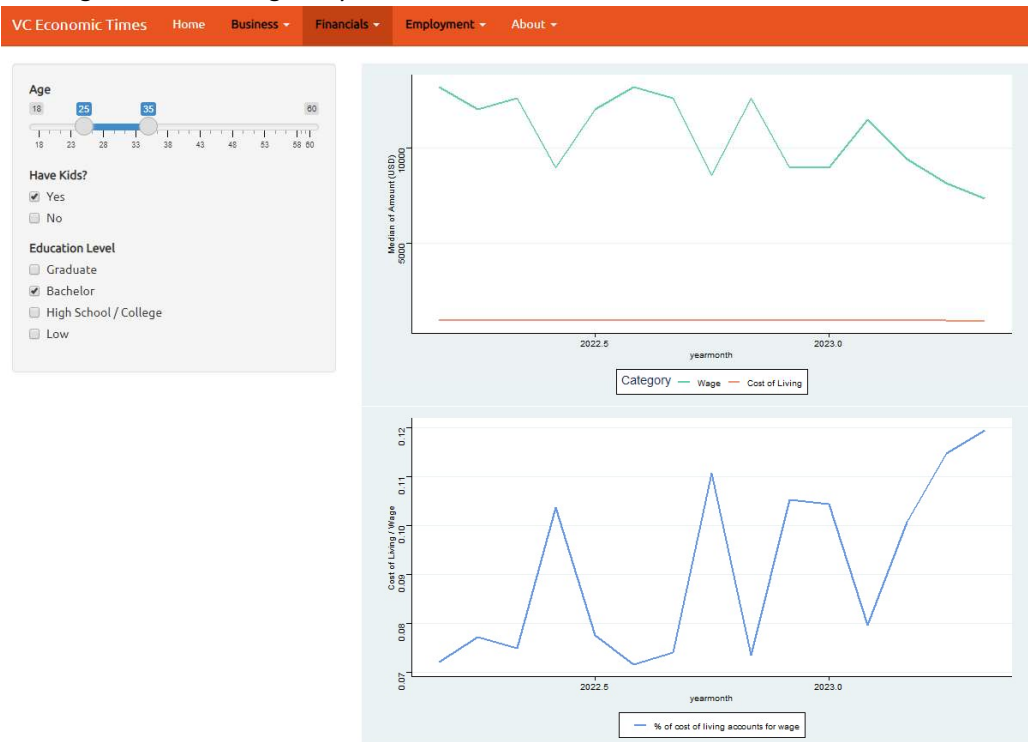
This line graph shows the occupancy rate of the pub for each hour. The line graph includes two lines, one for the occupancy rate for the first month (2022-03-01 to 2022-03-31) and one for the last month (2023-04-25 to 2023-05-24) of the available data.

It has four inputs on the left panel:

- Drop Down Selector for 'Pub Id' for the user to select which pub to display the occupancy rates for.
- Two Drop Down Selectors for line type for the user to change the line types, one selector for the line representing the first month and one selector for the line representing the last month.
- Slider Bar for 'Line Thickness' which allows the user to adjust the thickness of both lines.

### 3. Financials

#### 3.1 Wage – Cost of Living Analysis



The top plot displays two lines for the trend of wage median and cost of living median from March 2022 to May 2023. The bottom line plot represents the ratio of cost of living to wage from the same period.

It has three inputs on the left panel:

- Slider Bar for “Age” for the user to select a range of residents’ age.
- Check Box Selector for “Have Kids” for the user to select if the residents’ have kids where multiple selection is allowed.
- Check Box Selector for “Education Level” for the user to select the residents’ education level where multiple selection is allowed.

## 4. Employment

### 4.1 Average Hourly Rate Analysis



This treemap plot represents the distribution of the average hourly rate for jobs offered by employers in the city. It ranges from USD\$10 - \$41 per hour on average.

It has two inputs on the left panel:

- Drop Down Selector for “Colour Scheme” for the user to control the different colouration.
- Radio Button Selector for “Direction” for the user to switch the assignment of the darker and lighter colourations.

### 4.2 Employers – Jobs Analysis

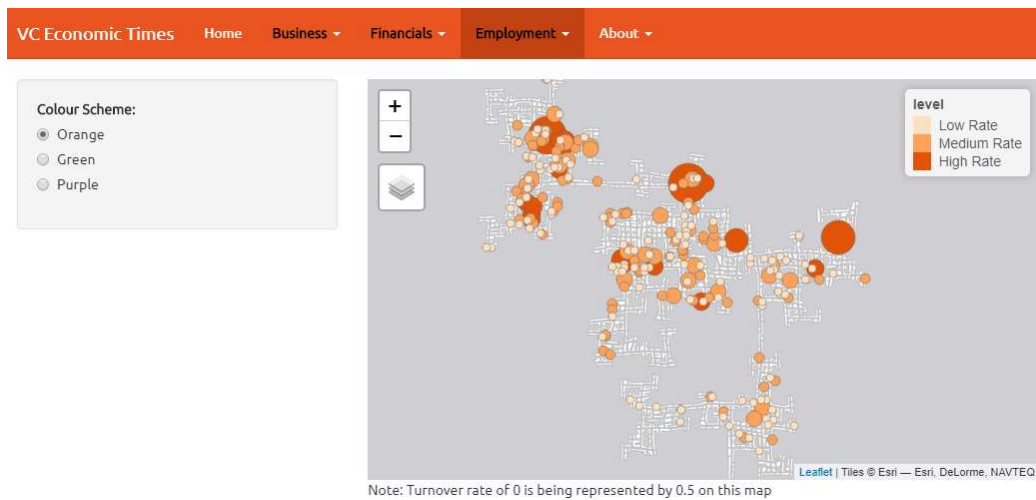


This shows the number of employers providing a certain number of jobs. It contains two interactive visualizations, namely a bar chart and a table. Once one of the bars is being clicked, the table of the corresponding values will be displayed.

It has two inputs on the left panel:

- Drop Down Selector for “Plot Type”: for the user to select the plot type of the bar chart.
- Check Box Selector for “Show data table” for the user to either show or hide the table.

#### 4.3 Turnover Rate Analysis



This map plot shows the distribution of employers with different turnover rates. The size of the dot represents of the level of turnover rate. “Low Rate” refers to those with 0 turnovers, “Medium” refers to those with 1-2 turnovers, and “High” refers to those with more than 2 turnovers.

It has one input on the left panel:

- Radio Button Selector for “Colour Scheme” for the user to control the different colouration.