CSC8626 Data Visualization: Summative Assignment Report Sheet

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Please fill this in within the boxes to describe how you completed the task. The filled in table should be no more than three pages long. Add screenshots of your PowerBI report(s) and references after the table.

Part One Task	**Description of how your submission achieved this.**
Fit to task: does the visualization allow the identification of areas most and least in need of aid.	Yes, the visualization is able to identify the area with most and least in need of aid through the map, where I used bubble size and colour gradient to show the number of affected people for a particular cell Id. The uncertainty is shown as upper and lower values so it could be analysed easily.
Use of visual channels	• Bubble shape is used for showing the spacial regions and their area and colour (saturation gradients) represent the infection rate. • For showing categorical data, colours with different hue values are used. • Colour saturation gradient is used for showing quantitative data
Gestalt design principles	• Principles of proximity, similarity (colour and shape of visuals) • continuity (added arrows) figure/ground (foreground colour) were implemented effectively.
Use of colour	• Only blue-orange combinations were used since colour-blind people will also be able to analyse the visuals.
Use of interaction	• Buttons are used to show the top 10 regions having high impact rates • slicers are used to filter the data based on infection rate. • Used navigating buttons for map
Use of language and text	Appropriate labels and titles are applied to the visuals to aid the interpretation process.
Technical aspects: performance, reliability, fit on desktop screen.	Good performance was achieved by selecting only the optimal number of files randomly. The accuracy level was improved by rounding the values to a suitable level. Using sliders and interaction methods, a good fit to screen and good visual quality were generated.
Part Two Task	
Fit to task: does the visualization allow the identification of areas most and least in need of aid.	Yes, the visualization is able to identify the area most and least in need of aid through the map where I used bubble size and colour gradient to show the number of affected people for a particular cell Id. The uncertainty is shown as upper and lower values so it could be analysed easily. Suitable aggregate methods were used to combine standard deviations and mean.
Effective visual representation of the data variations over multiple runs.	The average number of affected people and the standard deviation are used in the graph which represents the estimates for all four simulations.

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Part 1 Screenshots

Please add a maximum of 3 screenshots displaying your PowerBI report for part 1 in different states of analysis.

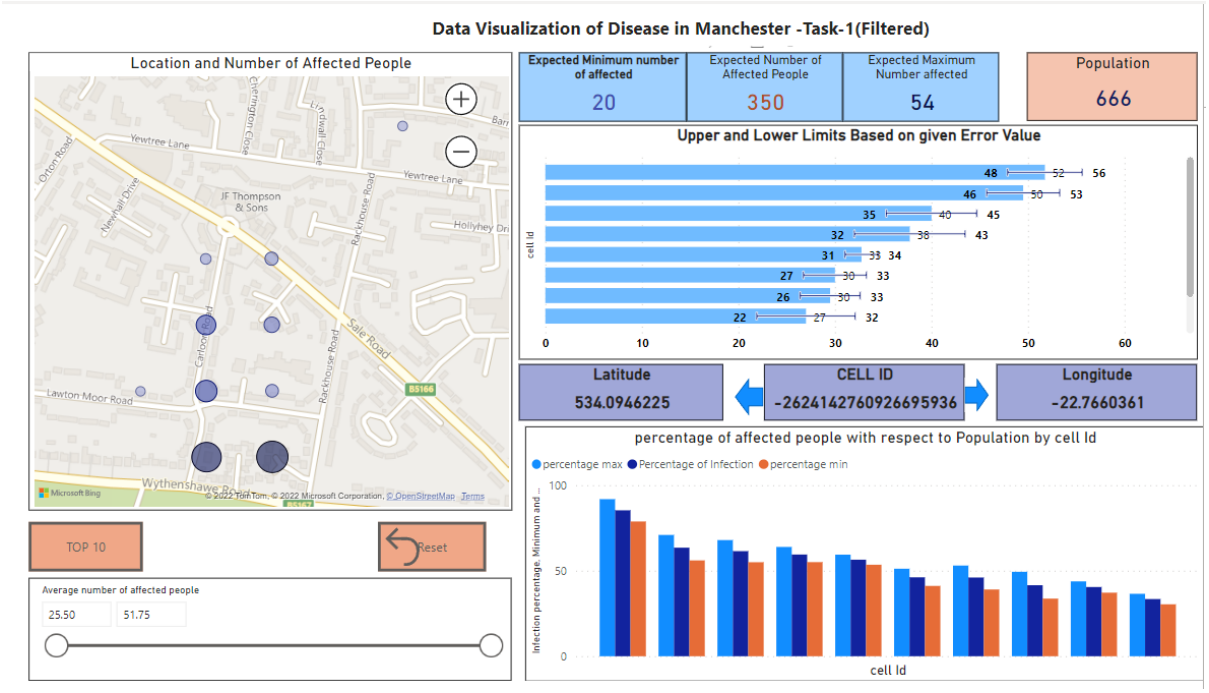

Figure 1 Visualization view showing the top 10 infected region

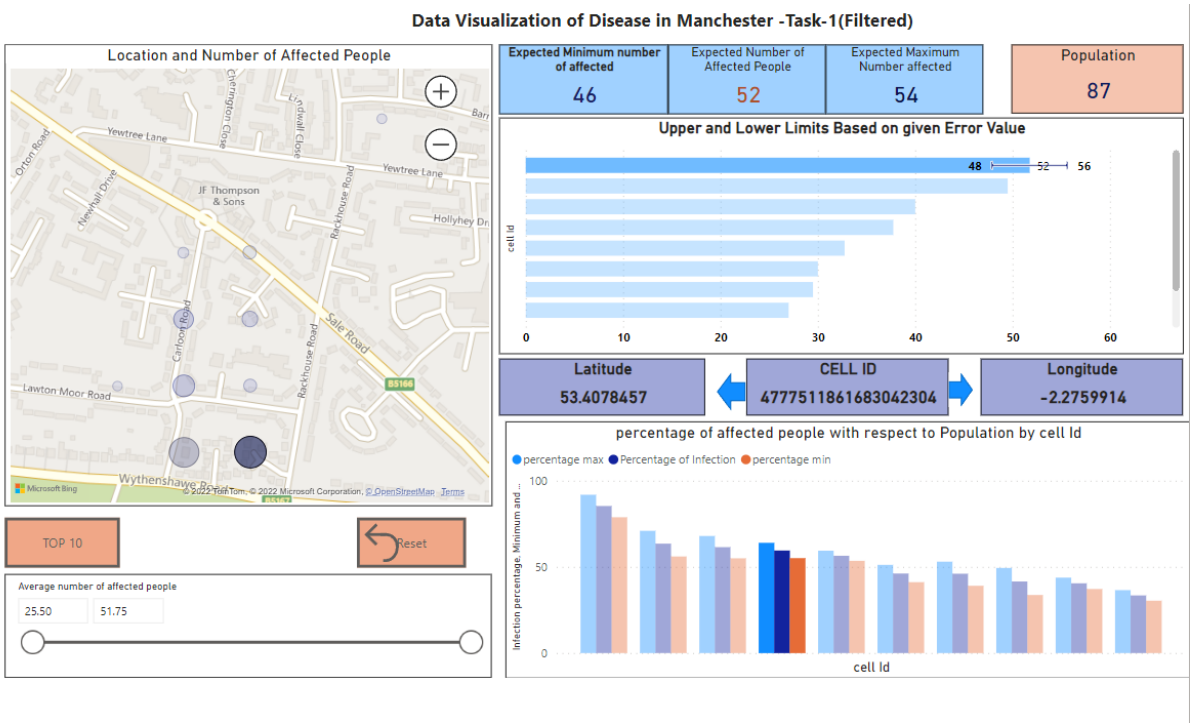

Figure 2 visualization showing the details of a particular cell Id

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Part 2 Screenshots

Please add a maximum of 3 screenshots displaying your PowerBI report for part 2 in different states of analysis

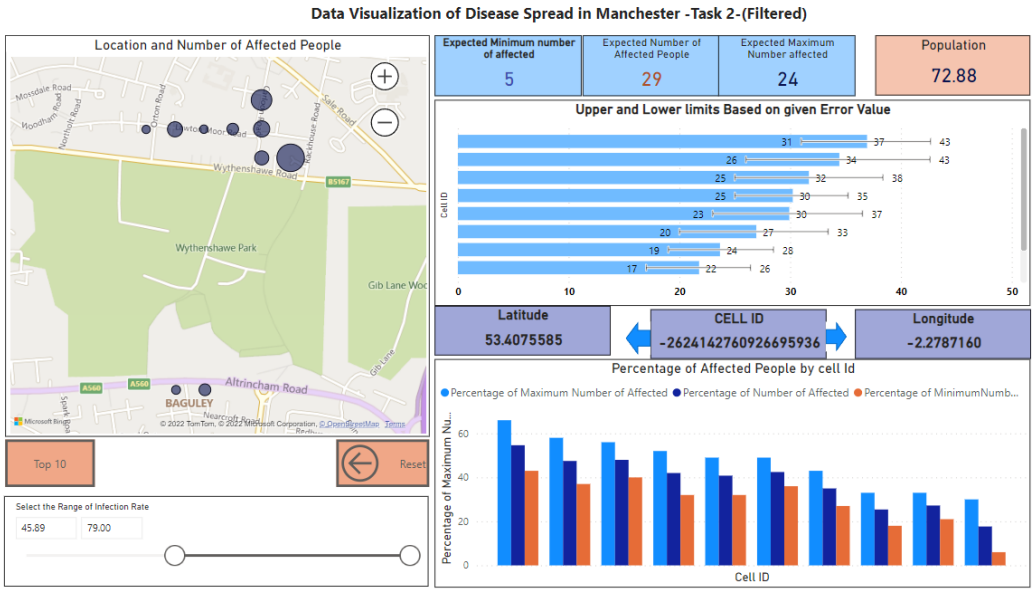

Figure 3Visualization view showing the top 10 infected region

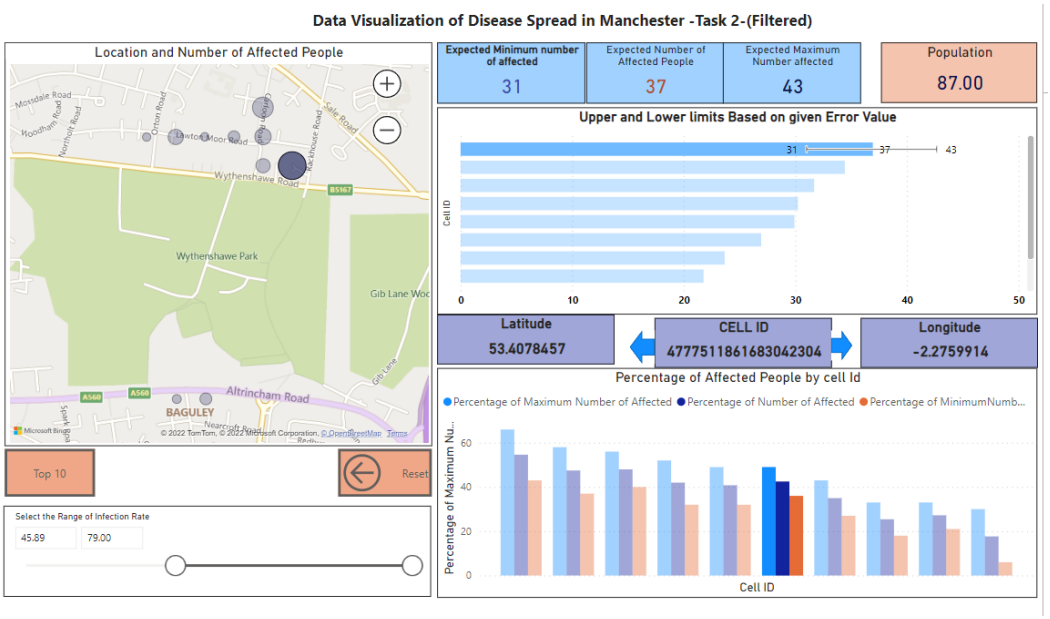

Figure 4visualization showing the details of a particular cell Id

References

[1] P. Kovesi, “Good Colour Maps: How to Design Them,” Sep. 2015, [Online]. Available: http://arxiv.org/abs/1509.03700

[2] B. E. Rogowitz and A. D. Kalvin, “The ‘Which Blair Project’: A quick visual method for evaluating perceptual color maps,” in *Proceedings of the IEEE Visualization Conference*, 2001, pp. 183–188. doi: 10.1109/visual.2001.964510.

[3] R. Williams, “’ The Non-Designer’s Design Book’: Typographic principles for the visual novice.” [Online]. Available: www.peachpit.com.