

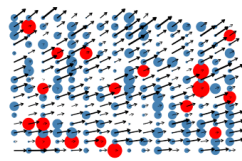
### Report sheet:

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Please fill this in within the boxes to describe how you completed the task, references can be added after the table. This should in total be no more than three pages long.

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 allows the identification of areas that are most in need of aid. The average of infections based on the data generated by four simulations is considered as a main key, which helps in identifying the location of the most infected place. Apart from this, additional variables which includes distance from the epidemic centre of the virus spread and the rate of infection based on population is taken into account to represent the outbreak of the Virus and its spread across regions.
Use of visual channels	The key visuals that are used to identify the most affected region are represented through a geographic (ArcGis map). Supporting to this the Bar graph and the stacked area chart are used to demonstrate the location of infection and the rate of infection based on the region of spread.
Gestalt design principles	Gestalt design principles are considered in priority to distinguish and identify key locations and parameters from widely available information in the visualization. With this the importance of describing locations of cells, they are distinguished from a thousand of cells post applying necessary filters. Information represented in the visuals are limited to its importance based on its requirement.
Use of colour	Colour identification is the easiest way to identify and analyse the situation for decision making. Hence, minimum colouring is used to minimize the confusion of understanding. Along with this colour contrasts are used which is required to identify the different variables. Shades of colours are used which will be easy for understanding the visualization.
Use of interaction	Interactions are used in such a way where it doesn't confuse in making a decision at this critical situation. In the meanwhile, the interactions used are sufficient to understand why it has been used and are able to generate the expected outputs. The titles are given in such a way which are easier for general humans to identify what's going on with the visualization.
Use of language and text	The text language is used wherever necessary. They are used to describe the number of variables in the visuals. Along with this, the text language is also used to describe the titles, headings and other major connections between the visuals. Since the visuals are focused to be used by the decision makers, leaders and emergency



	personnel, the text language is used which helps them to understand what they have to do and to which area they have to send the medical aid first.
Technical aspects: performance, reliability, fit on desktop screen.	The key indicators of the visuals are the distance of infected region from the origin of epidemic, average infections in locations, rate of infection based on population. Performance of the visual can be estimated by the importance of distance between the infected location from origin and associated rate of infections. The distance in miles will help track the spread of infection and the need to act as soon as possible and also to predict the possible areas to provide aid in near future. Infected regions which can be considered as critical are isolated or filtered based on the measure of spread and are represented in a map to quickly send the aid. The information provided can be accessed very quick with very minimal computing power. Though the availability of internet to access and generate the geospatial information is a requirement. This will provide a chance to view the information and generate required information in cases where the resources are questionable. Visuals are generated to access, view, and project from any desktop screen.
<b>Part Two Task</b>	
Fit to task: does the visualization allow the identification of areas most and least in need of aid.	Yes, the visualisation demonstrates the identification of critical cells after recording multiple readings. Most effected infection regions and values associated to them are used as key parameters for visuals. Prime objective of the visual is to view the nature and trend of change in the value of uncertain variables that are recorded in multiple attempts.
Effective visual representation of the data variations over multiple runs.	Data variations of uncertain variables are considered as key indicators for the visual as it will demonstrate the change in values which may be due to failure in recording the values or the possibility of host-spot. Hence, to not avoid any possible indication on finding a new hot spot, I have tried to focus the critical infection regions to check how the uncertain variables are changing and understand their behaviour.
<b>Report Contents</b>	
Logical content structure, range and quality of referencing.	The information used in the visual is to consider the sudden spike in the uncertain variables after multiple runs. This suggests that there may be a risk in which certain locations maybe under high risk. The priority is to identify the high-risk regions and send the aid to that regions. Referencing is done for PARC and other visualization principles based on the lecture materials.