

PROBLEM STATEMENT

Create a dashboard (heat map) that shows the COVID-19 threat level of wards of Mumbai in real time, based ONLY on the actual cases ward-wise.

EXPLANATION

You will be given the following input points (real data points) for **each ward**:

- Current Number of Active serious COVID-19 cases found in standalone apartments (n1)
- Current Number of Active serious COVID-19 cases found in medium congested areas (n2)
- Current Number of Active serious COVID-19 cases found in high congested areas (n3)
- Population of each ward (p1)

Based on the above 3 numbers, the map of Mumbai, divided into wards (one can choose any map for the same that is available online or through any open source system), shall be shown in form of heat map, where each ward is represented through a specific colour:

- Red: where $((n1*1.5+n2*2.6+n3*3.6)/p1) \geq 0.02\%$
- Orange: where $((n1*1.5+n2*2.6+n3*3.6)/p1) \geq 0.01\%$ and $< 0.02\%$
- Blue: where $((n1*1.5+n2*2.6+n3*3.6)/p1) < 0.01\%$ and $> 0\%$
- Green: where n1 or n2 or n3 is zero

We are using the official colour code used by MCGM for the above. The thresholds are decided based on the actual spread in Mumbai.

The threshold numbers may change so they should be easily editable in the back-end.

Create a heat map, keeping in mind the city commissioner and the state administration heads as the consumer of the same. Design and visualization is key as the map should be able to speak volumes in seconds.

IMPACT

We provide data driven decision support systems to various government bodies, Mumbai being one of them. The dashboard created here can be one of the auxiliary screens in our system.

Kindly note that our system provides decisions related to economic impact, social impact, lockdown planning, resource planning, essential services planning, for multiple levels of the government. By seeing this heat map, some of the outputs of the decision-making system can be improved. The selected heat map shall be used in some form in our system and may be presented to the MCGM as well. Using this map, the city administrator can get a quick idea with regards to monitoring of specific wards for that day.

The winning dashboards shall also be presented to a team of 300 experts comprising of government officers, ex-civil servants, military veterans, economic experts, researchers and data scientists, working as part of the Sapio Umbrella.

WINNERS

Also, besides being appreciated through a certificate by Sapio Umbrella, a prominent government advisory firm, the winners may also have an opportunity to do deeper work for the governments in their fight against COVID-19.