**Project**: VAST 2010 MC2: **Characterization of Pandemic Spread**

**Team Members:** Vamsi Krishna Kanagala / Sai Teja Vishal Jangala / Pavan Kalyan Reddy Thota / Manikanta Vankayala / Chandrahaas Chintalaboguda / Arun Raj Deva

**Completed Tasks**:

Vamsi Krishna Kanagala:   
a) Made changes to our initial design and developed User Interface(UI) of our application.

b) Completed visualization 2 as per the proposal. And it includes the following tasks:

1. Refined the pre-processed data according to the needs of our visualization(using python)

2. Added some additional functionalities, like transitions and animations, and tweaked the proposed model(using D3.Js)

3. Integrated the developed model to our application.

Sai Teja Vishal Jangala:   
a) Made changes to our initial design and developed User Interface(UI) of our application.

b) Completed visualization 2 as per the proposal. And it includes the following tasks:

1. Refined the pre-processed data according to the needs of our visualization(using python)

2. Added some additional functionalities, like transitions and animations, and tweaked the proposed model(using D3.Js)

3. Integrated the developed model to our application.

Chandrahaas Chintalaboguda:   
a) Made changes to our initial design and developed User Interface(UI) of our application.

b) We have completed the visualization 1 along with some changes

Pavan Kalyan Reddy Thota: Visualization 3 as per submitted proposal, Data pre-processing.

Manikanta Vankayala:

a) Data pre-processing

b) We have completed the visualization 1 along with some changes

Arun Raj Deva: Visualization 3 as per submitted proposal, Data pre-processing.

Data pre-processing: With 15 million rows in our data we are not able to load the entire data to the application as d3 is taking a lot of time. To overcome this we have extended the preprocessing and using techniques of aggregating the data and the filtering data for each visualization we are able to reduce the time significantly.

Visualization 3: For this particular visualization, first we preprocessed the data that can be used for this visualization. In this visualization we have used different color hue to represent the country and then we have calculated the span of days a patient is alive. With this data we have made graph which gave death span for each country, life expectancy of the newly admitted patients and an anomaly.

Visualization 1: As the preprocessed data is huge, we have extracted the data which can be used specifically for our first visualization using python. We have taken a number of deaths and hospitalized on particular days across various countries and we derived the moving windowed average count from the data, made few updates to the proposed graph which makes it even more informative. We integrated this visualization to our main application.

**Current Tasks:**

Vamsi Krishna Kanagala: Working on 5th visualization according to approved proposal.

Sai Teja Vishal Jangala: Working on 4th visualization according to approved proposal.

Pavan Kalyan Reddy Thota: Working on 5th visualization according to approved proposal.

Manikanta Vankayala: Working on 4th visualization according to approved proposal.

Chandrahaas Chintalaboguda: Working on 4th visualization according to approved proposal.

Arun Raj Deva: Working on 5th visualization according to approved proposal.

**Remaining Tasks for Project Completion:**

Need to complete the visualizations which we are currently working on and should start the remaining visualizations. Once after completion of all the visualizations, we should integrate them into our application.