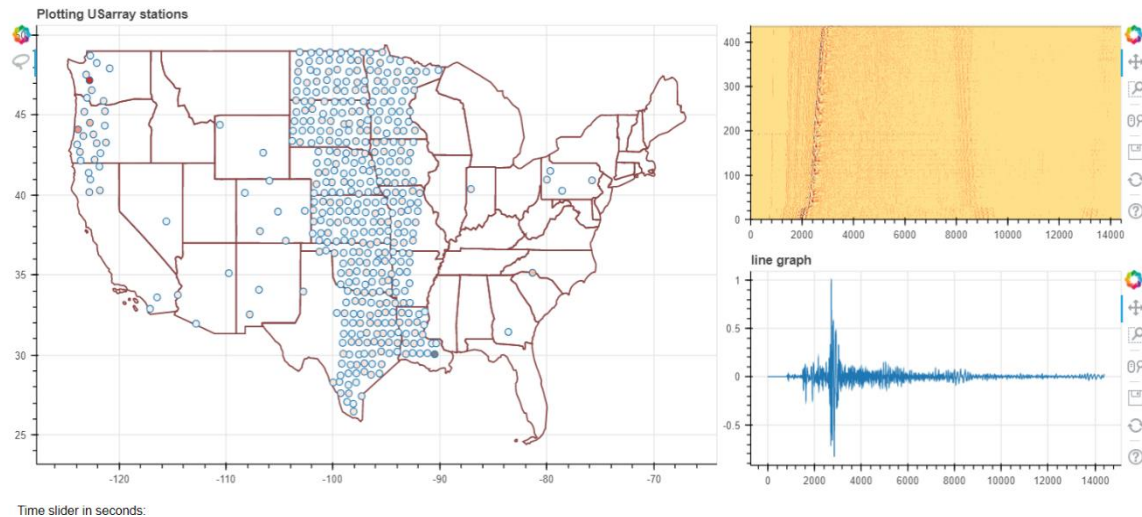


## Transportable Array – Tohoku earthquake's grid

We worked on “Bokeh” package to get the desired interactive visuals

A snapshot of the graph that we came up with is below,



### Why we took this approach:

We read a lot about Bokeh and got to know that it uses Pyscript from flex package and that we could build better visualization models using very little Javascript since it had custom JavaScript included in it. It was also mentioned in the few articles and documents that implementing Bokeh takes immense understanding and patience. This sounded challenging to us and we decided to work our first component with it. Another major reason was the extensive scope of functionality coverages that Bokeh offer, in its interactive model approach.

### Strengths of our approach:

The major strength of this approach was the reduction in the line of codes as mentioned earlier. If we had used matplotlib, we would have ended up writing more than twice the code than what we had have now.

It came with a lot of interactive tools like ColumnDataSource, HoverTool, TapTool, Slider, Toggle.

### Weakness of our approach:

Visualizing a spectrogram was extremely challenging. It took most of our work's time before we got our desired output after multiple attempts.

It was also very time consuming as rendering an image took a lot of memory and often, we got the 'Oh snap' error in our notebook.

Running the program, which should have normally taken a few seconds, now took almost a couple of minutes. The documents we had read turned out to be true, it required a lot of patience.

**What we wished we had been able to do:**

We could have developed faster working visualization as current visualization takes time. And we could have reduced the complexity of the code.

**Contribution:**

Coding: Sanket Sinha

Data Management: Sanket Sinha did data management.

Data Cleaning: gopikrishnanpr and Kashish did Data cleaning.

Writeup: Sanket Sinha and Gopikrishnanpr did Writeup.