**228 team Alright Project Proposal**

**Team members:**

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**Project name:**

**Covid-19 Visualization and Prediction in the United States.**

**Github Repository:**

<https://github.com/JoeyLi01/Team-Alright-project.git>

**Data Source(current):**

<https://github.com/nytimes/covid-19-data>

**Abstract and Equipments:**

The Covid-19 pandemic has been with us for over 2 years and it has developed numerous contagious variants such as delta and mu. It cost us excess deaths as a true toll for late response. Covid-19 will likely be with us forever, and it is foreseeable that it will have more variants in the future with different reproductive numbers and death rate.

New York Times posted publicly their collected data about Covid-19 death cases, masks report. We set our goal to visualize the effect of wearing masks on stopping the spread of Covid-19 to provide people a way to understand the role of mask wearings. After exploratory analysis, we will further investigate the spread of each Covid-19 variant in the United States and predict the possible outcomes with respect to each variant based on the classical SIR model used in epidemiology. In order to efficiently explore the data and build models, we take advantage of Amazon Web Service to split the work. We set up our database and datawarehouse to store data and fact tables with the help of S3 Storage, Amazon glue and RDS. We run our queries and models using clusters in Amazon redshift. We achieve credential authentication by Amazon IM Roles. After all analysis, we create meaningful and insightful visualizations to demonstrate our information. At the end, we create a web demo to present our project.

**Milestones:**

| **Milestones** | **Date** | **Status** |
| --- | --- | --- |
| Generate project ideas and Compose project abstract | 9/12/2021 | completed |
| Project Design and Deliverables | 9/19/2021 | completed |
| Data Cleansing and set up database | 9/31/2021 | Yet to complete |
| Coding | 10/30/2021 |
| Testing | 11/7/2021 |
| Documentation and Final Report | 11/17/2021 |