1) Section in the report describing the enrichment data and data type.

Name	Definition	Data Type	Possible Values	Required
Year	Data available in the year	Date	2022	yes
Qtr	Quarter	Integers	1	yes
Area Type	Area Name	Strings	Nation, State, MSA, Country	yes
St Name	State Name	Strings	Alabama, Alaska, Arizona, etc	no
Area	Name of the area	Strings	U.S. TOTAL, Alabama -- Statewide, etc	yes
Ownership	Owner of the Industry	Strings	Total covered, Federal Government, etc	yes
Industry	Type of Industry	Strings	10 Total, all industries, 101 Goods-producing, etc	yes
Status Code	Codes	Strings	N	no
Establishment Count	Counts for the establishment	Integers	11294919, 60882, 70526, 171395, etc	yes
January Employment	Employees count in January	Integers	11294919, 2860360, 4456377, etc	yes
February Employment	Employees count in February	Integers	147172213, 2858451, 4529802, etc	yes
March Employment	Employees count in March	Integers	147781400, 2853067, 4534064, etc	yes
Total Quarterly Wages	Total wages for the quarter	Integers	2622652420011, 60805753244, etc	yes
Average Weekly Wage	Weekly wage averages	Integers	1374, 1637, 1347, etc	yes
Employment Location Quotient Relative to U.S.	Location quotient for employment	Integers	1.00, 1.42, 1.56, etc	yes
Total Wage Location Quotient Relative to U.S.	Location quotient for wage	Integers	1.00, 1.83, 1.66, etc	yes

2) How can you merge the data with primary COVID-19 data set?

To merge the data from the enrichment data set to main COVID-19 data set, we could use the following values as joins:

To merge the data between Employment data set and COVID- 19 data set, below are the findings:

- Area code in Employment data set can be mapped to CountyFIPS in COVID-19 data set.
- In the second case, we can merge the two Data tables as below:

- o Filter the Area Type in Employment Dataset with County
- o Split the String for Area column in Employment Dataset using comma (,) to get County Name.
- o Merge the two data tables with splitted Area Column (County Name) in the Employment Data table and County Name column in COVID-19 dataset.

3) Describe how your enrichment data can help in the analysis of COVID-19 spread.

- In Employment Dataset, we have columns such as Area, Ownership, Industry, Area Type etc. In each county, how many COVID cases are spreading in Industries owned by Federal, how many COVID cases are spreading in Industries owned by State etc. can be analyzed. Based on this analysis, we can predict how well each state or Federal (who owns the industry) follows the rules and regulations regarding COVID-19.
- Employment Dataset also has Quarterly Wages and Each month employment columns. Based on these columns, we can analyze the COVID spread where the employment count is high or low (i.e., if more people working in an Industry, how the COVID spread is or we can also analyze the covid spread where the wage rate is too high). Based on this data, we can also predict how the COVID cases spread in the counties that produce higher wage level (indirectly, we can be able to predict whether highest waged counties are getting affected more or vice versa).