

Visualization 4

What can we learn from the visualization?

To understand the distribution of the `timePeriods` within which points of interest were founded and dissolved.

What is the name for the type of visualization(s) used?

Heatmap

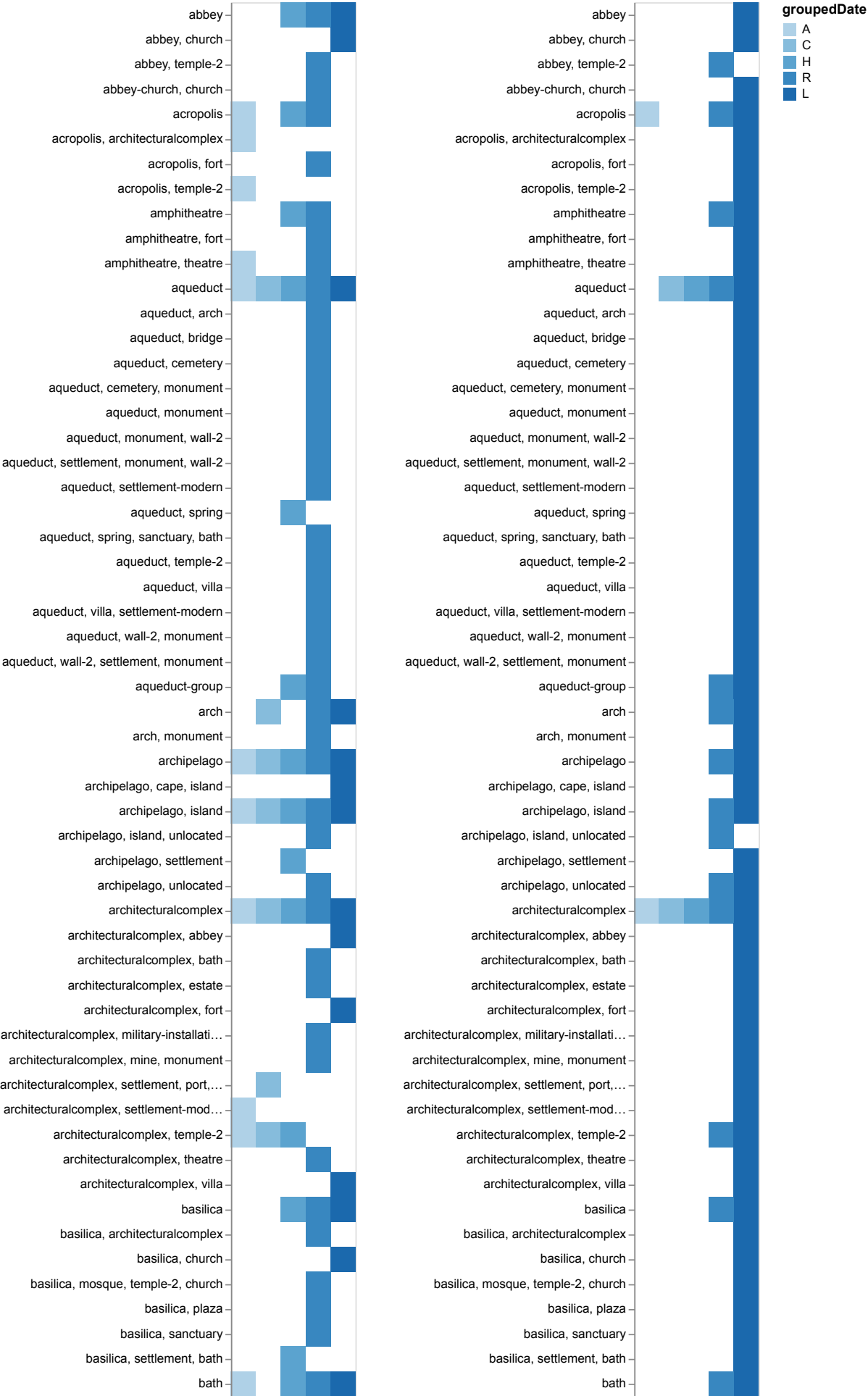
```
import altair as alt

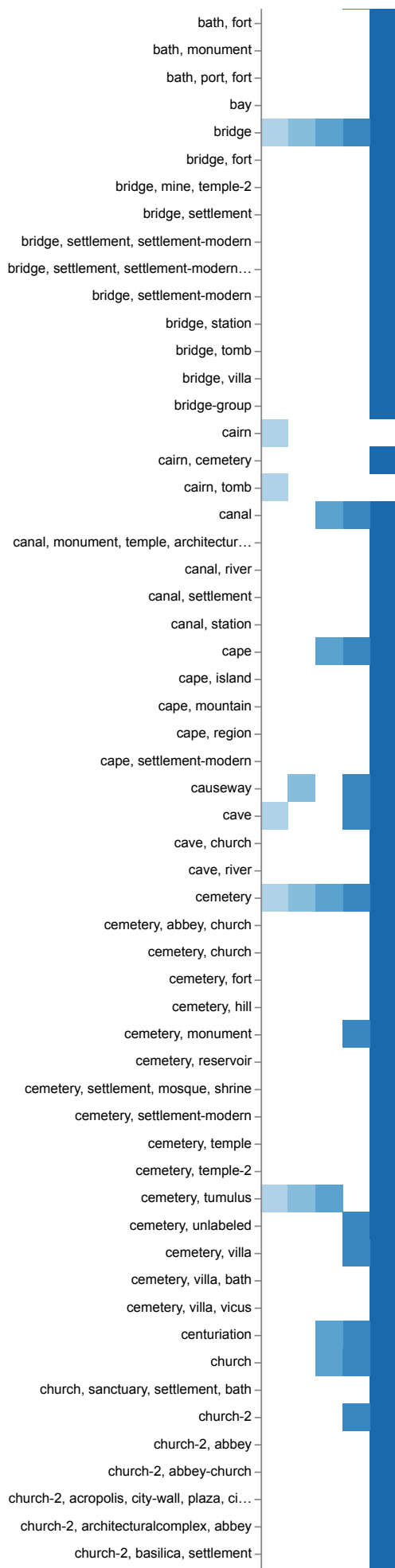
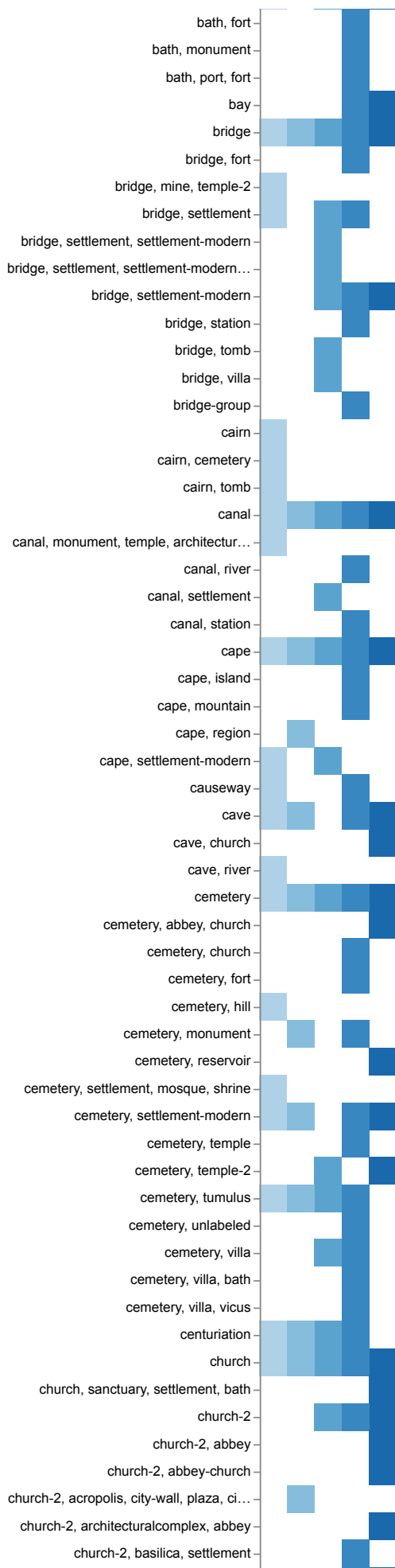
places = ('https://raw.githubusercontent.com/SwanseaU-TTW/csc337_coursework1/master/ple:

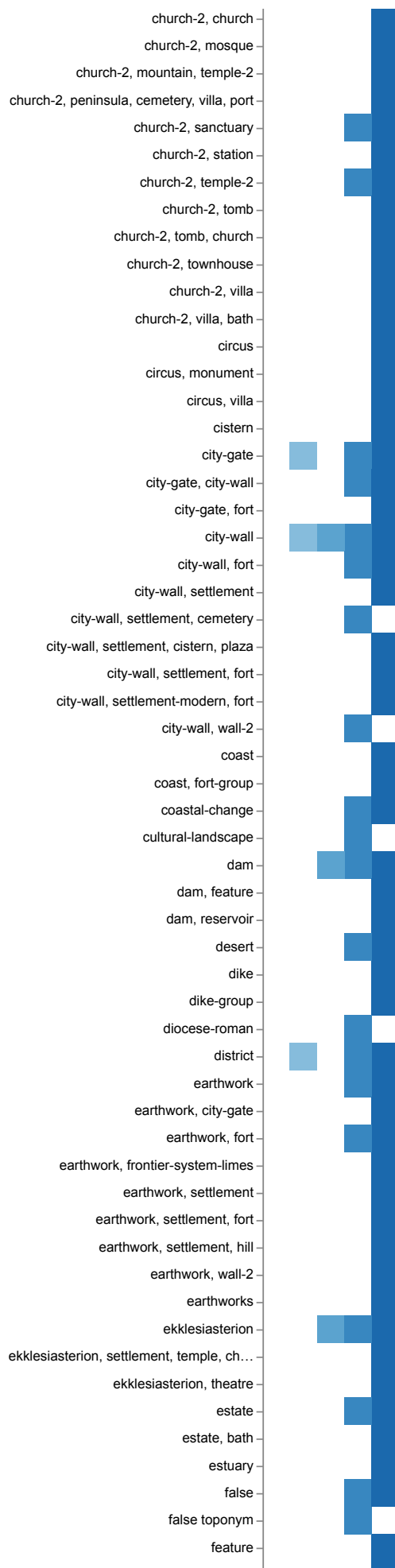
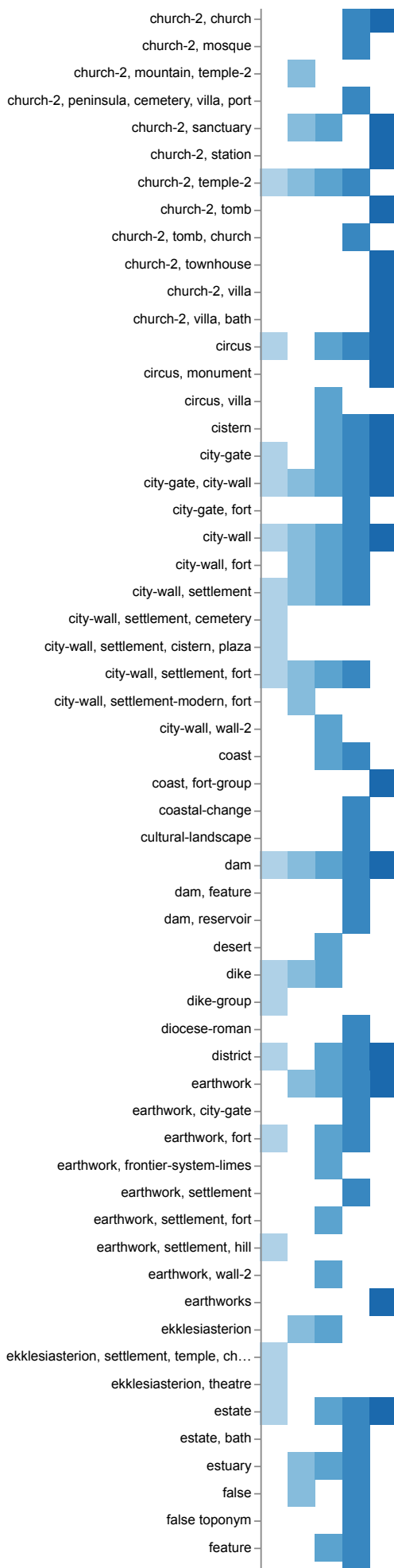
def heatMap(column):
    return (
        alt.Chart(places).mark_rect().transform_calculate(
            groupedDate=f'datum.{column} < -550 ? "A" : datum.{column} < -330 ? "C" : d:
        ).encode(
            alt.X("groupedDate:0", sort=['A', 'C', 'H', 'R', 'L'], title=f'{column}(grou
            y='featureTypes:N',
            color=alt.Color('groupedDate:0', sort=['A', 'C', 'H', 'R', 'L']),
            tooltip=['count()']
        )
    )

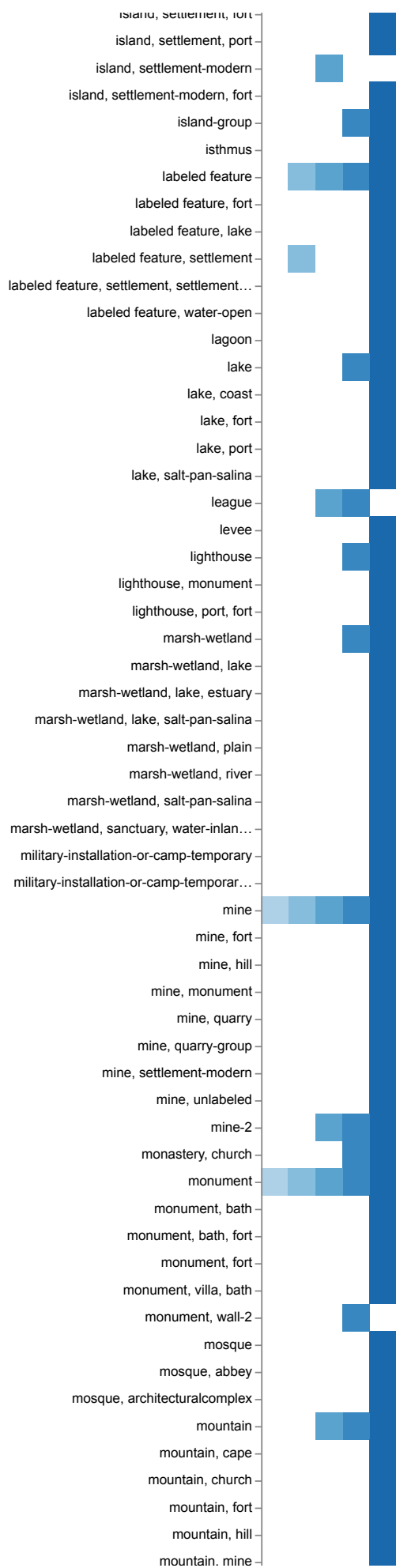
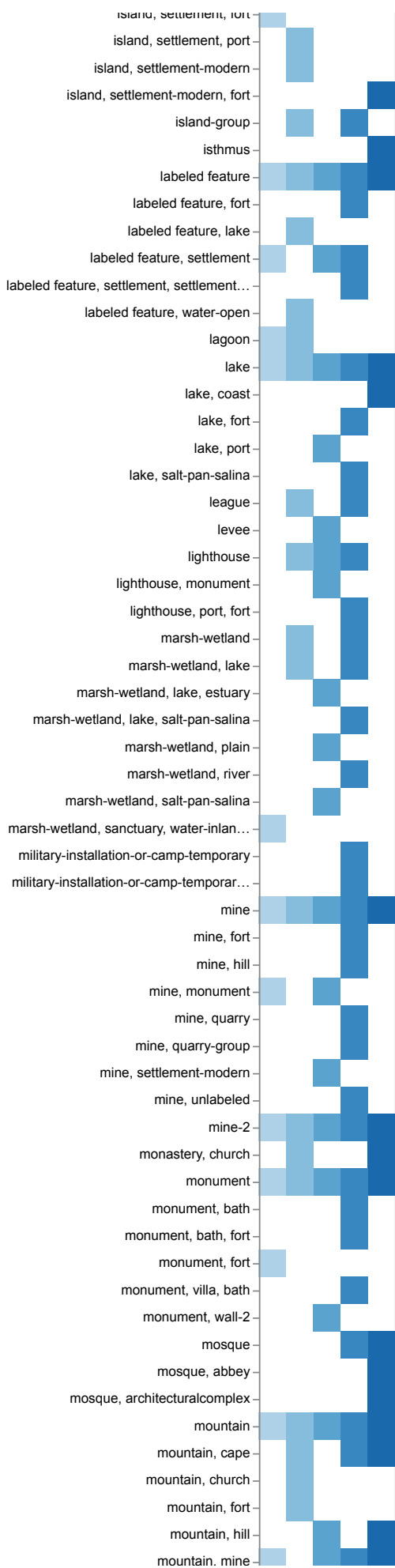
alt.hconcat(
    (heatMap('minDate') | heatMap('maxDate'))
).properties(
    title='Heatmaps showing what featureTypes have a minDate and maxDate in what timePei
).configure_title(orient='top', anchor='middle')
```

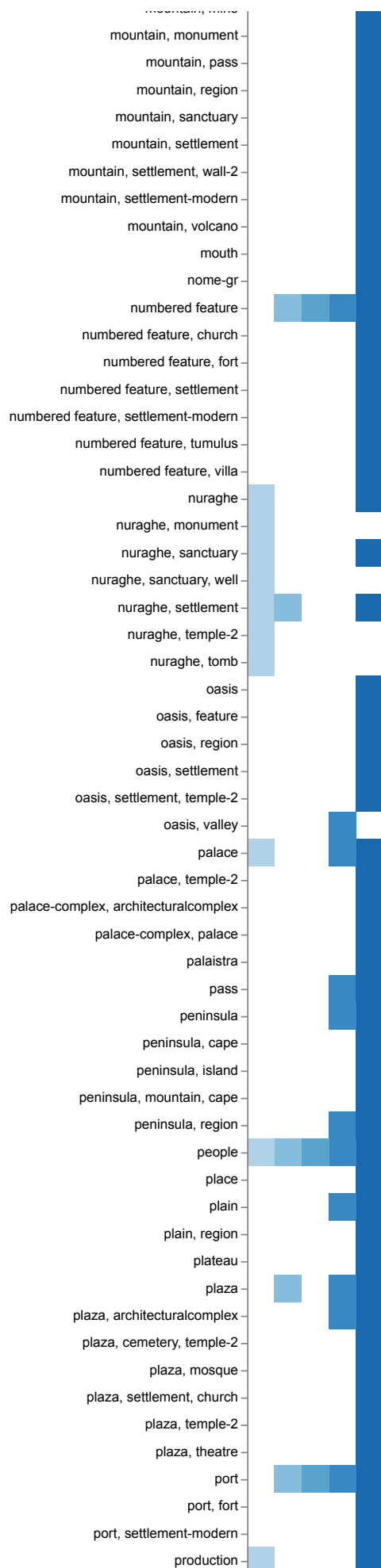
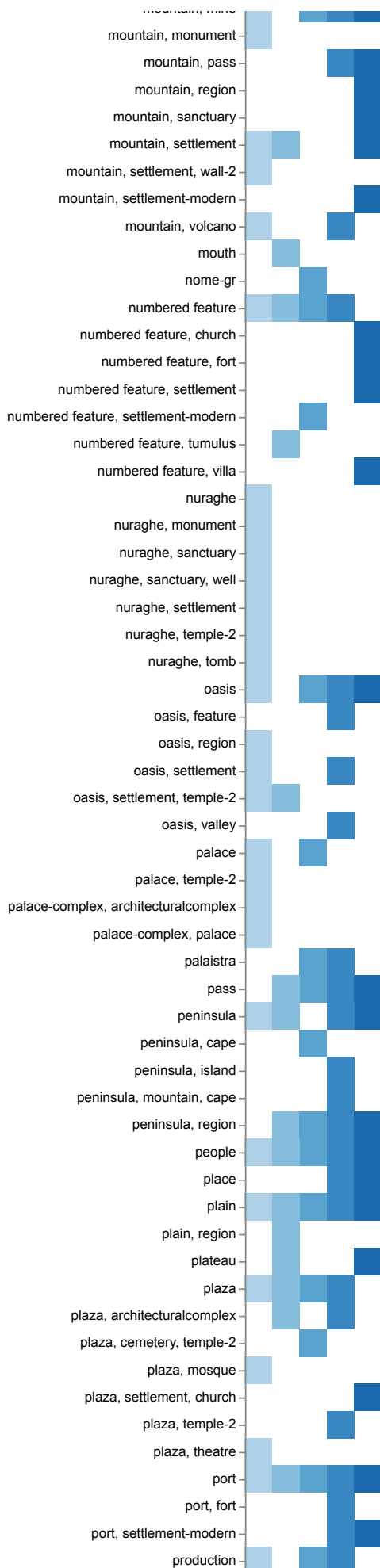
Heatmaps showing what featureTypes have a minDate and maxDate in what timePeriods for each record on the places pleiades dataset









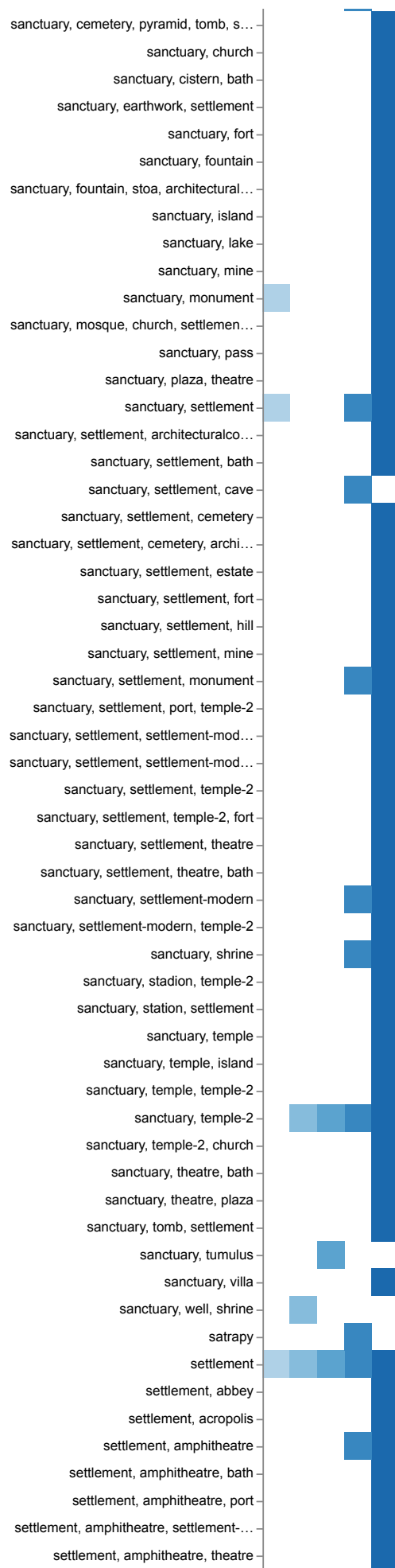
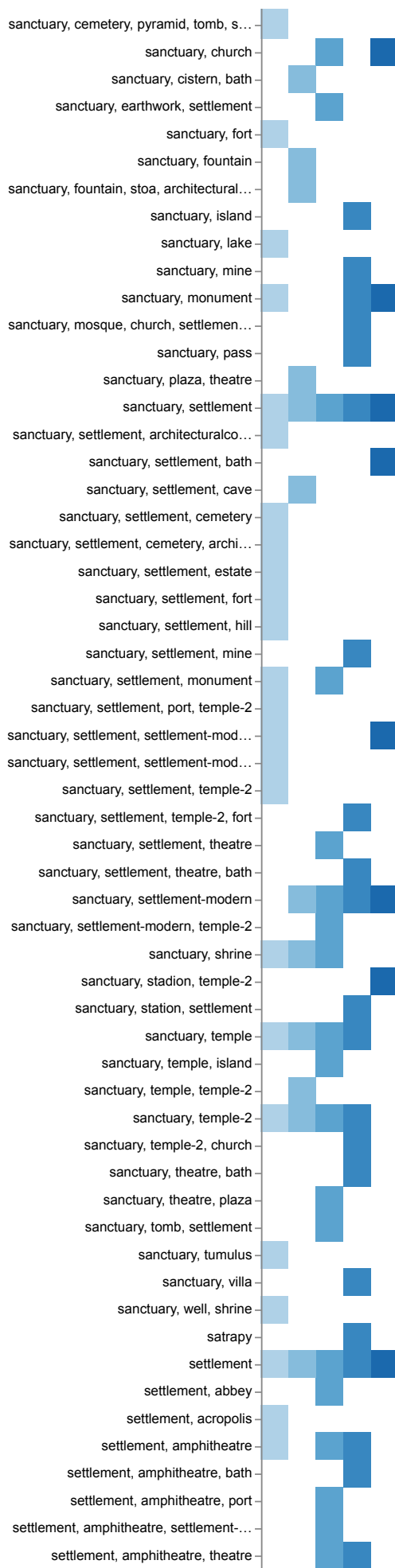


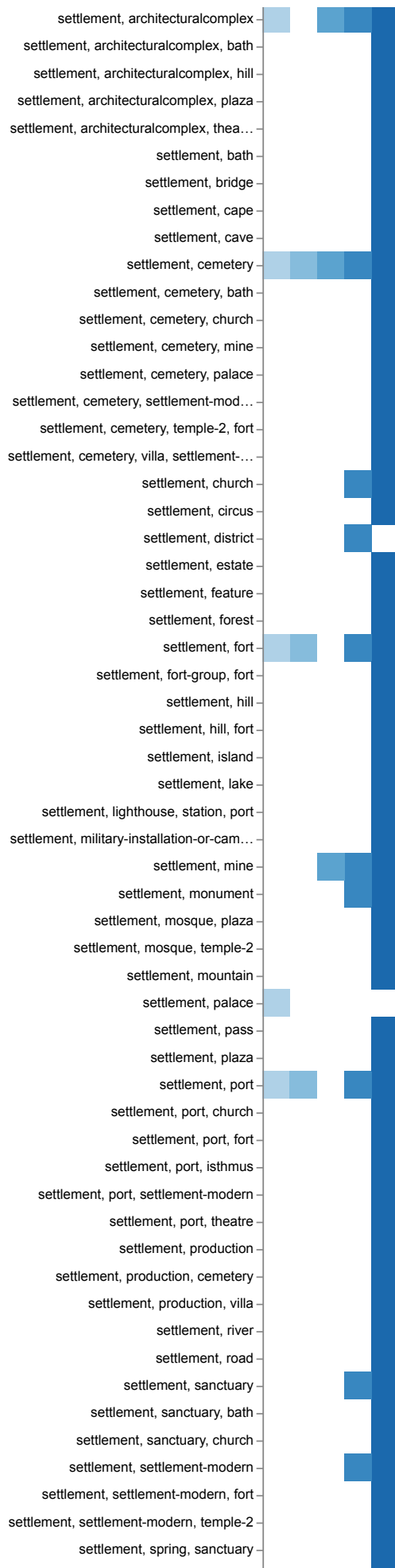
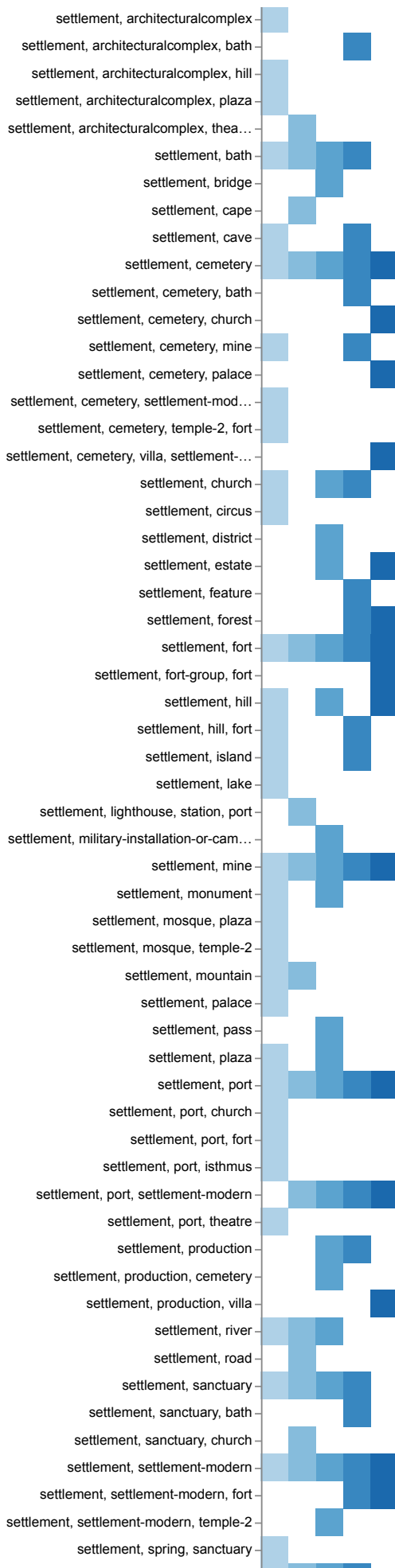
featureTypes

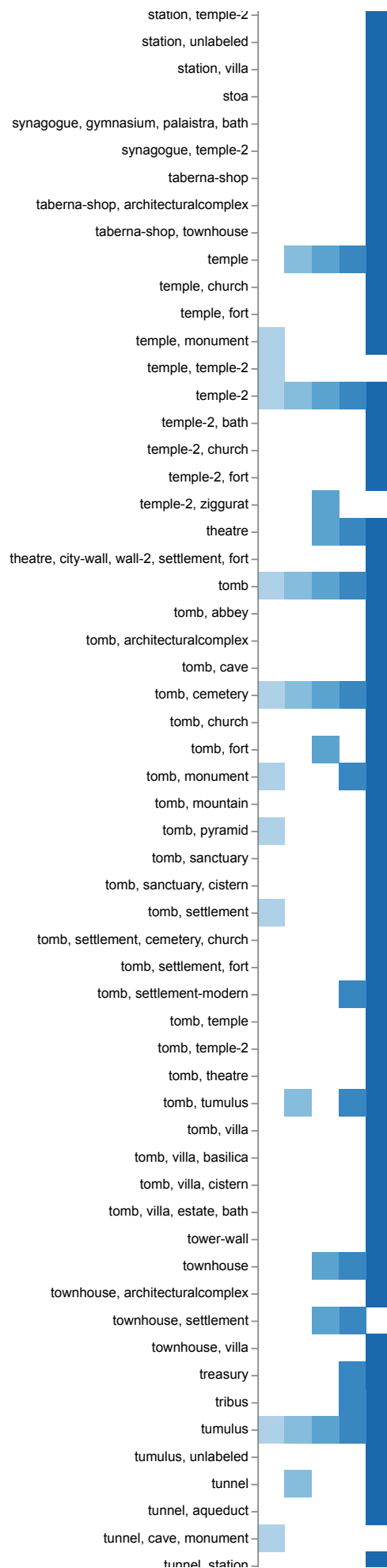
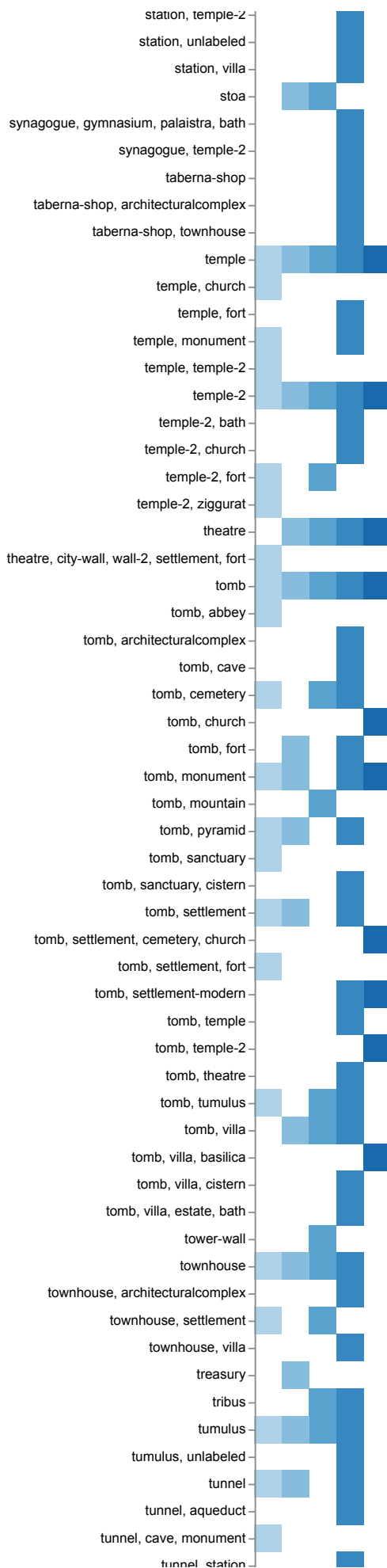


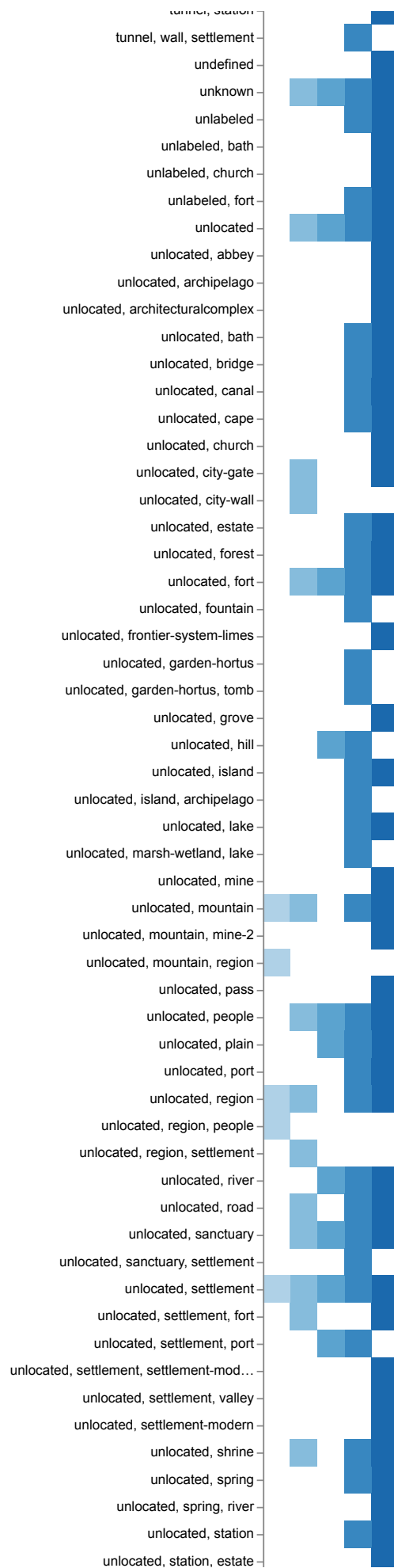
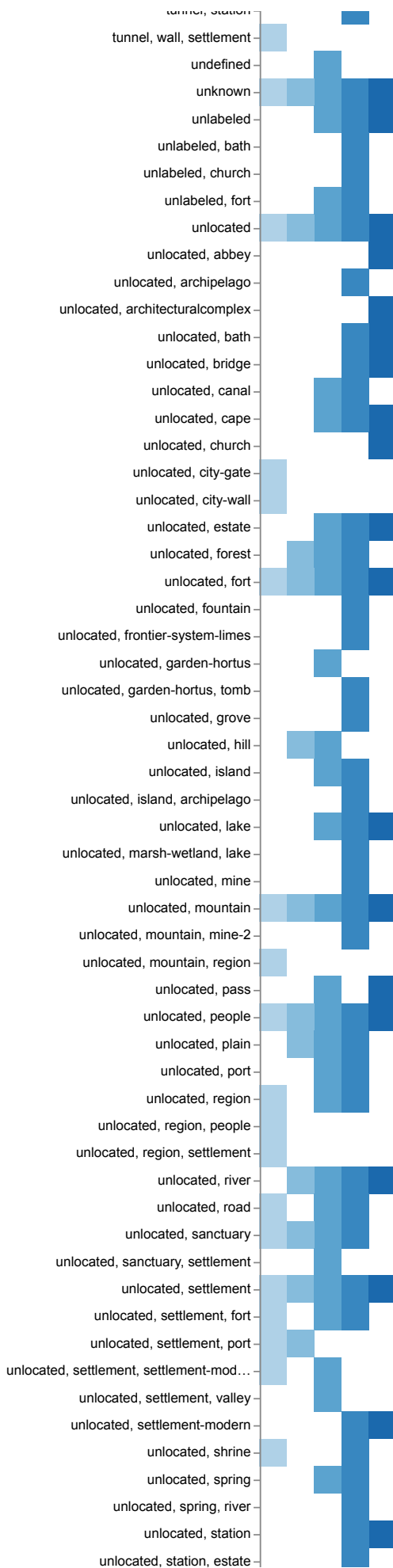
featureTypes

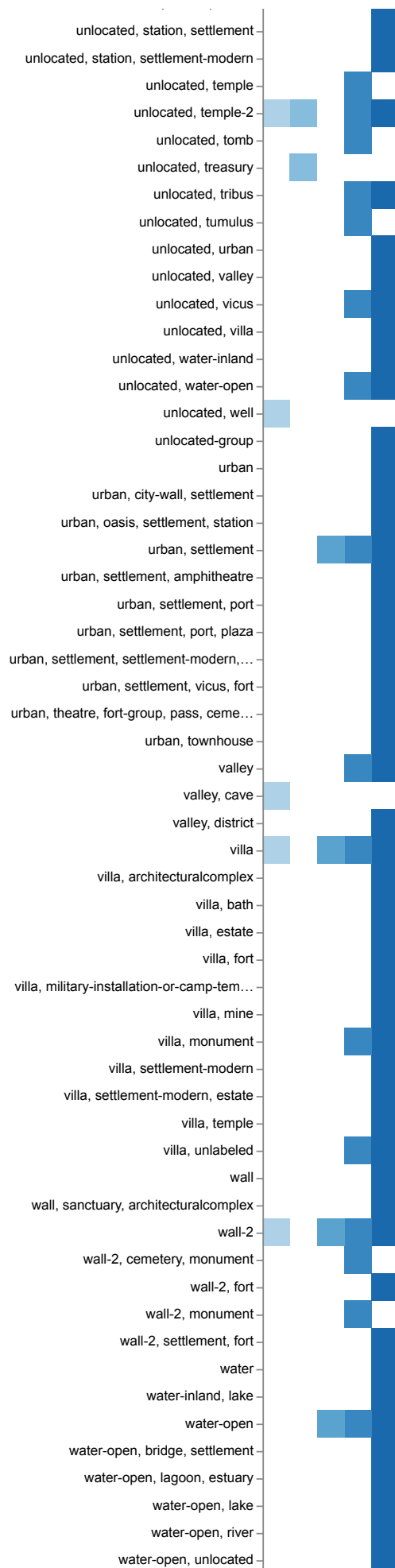
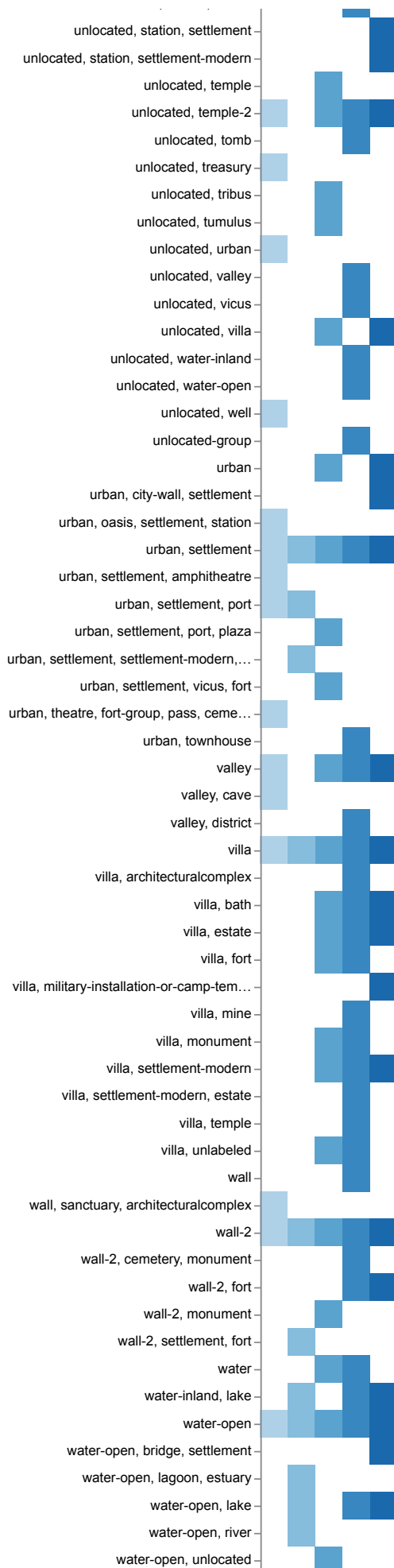


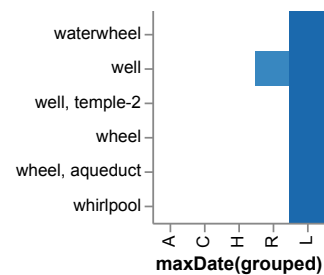
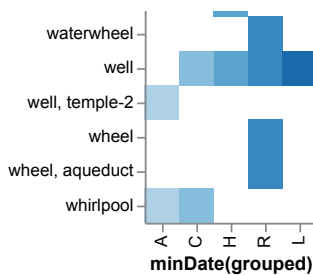












What are all visual mappings used?

Given that date is minDate or maxDate

x position

date (grouped and sorted according to the group)

y position

featureTypes

color

date (grouped and sorted according to the group)

tooltip

count of records

Was there any special data preparation done?

The data has been grouped to match the pleaidies README on `timePeriods` such that the records fall into the following bins "... 'A' (1000-550 BC), 'C' (550-330 BC), 'H' (330-30 BC), 'R' (AD 30-300), 'L' (AD 300-640)".

What are the limitations of your design?

The visualization takes up to much space. This could be improved by using a smaller sample size or possibly, grouping the `featureTypes` into a smaller list of sub-categories such that its records are easier to see at a glance. Data processing to split the `featureTypes` column by the delimiter could also help.