Master thesis proposal Aligning curves related to the spread of the SARS-CoV-2 virus

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There are multiple time series that are associated with the spread of the SARS-CoV-2 virus: confirmed cases, case fatalities, percentage of positive tests, tests, total mortality, excess mortality, e.t.c. All of these can be further scaled by population size and subdivided by age or sex (depending on data availability). Such variables can be considered on the national or regional level. When comparing time series from various regions/countries between each other one will see that some behave similarly while other differently. The aim would be to identify which curves from which regions/countries have similar dynamics, and which different ones. In particular one should identify scale and time shifts between different curves. For the thesis publicly available COVID-19 and mortality connected data will be used. There is some flexibility on the choice of countries for analyzing.