It is an interpolation technique that can be used with unknown means and works for minimising error variance wh
intervals which can again be used as parameters

It does not scale well for large large datasets and uses sparse solvers

- requires detrending or localised variograms.

The actual works on using an Autoregressive model (Markove model with a bit more lag) and then minising the va


Main idea:

- We can use latitude, longitude and time as 2 inputs to predict magnitude at specific points
- I then tried to use time as a vector and then see how that would work

I tried working with sample data and seeing how the model would work:

- it ended up singular matrix each time which is because we have a lot of the same coordinates in it like if we se
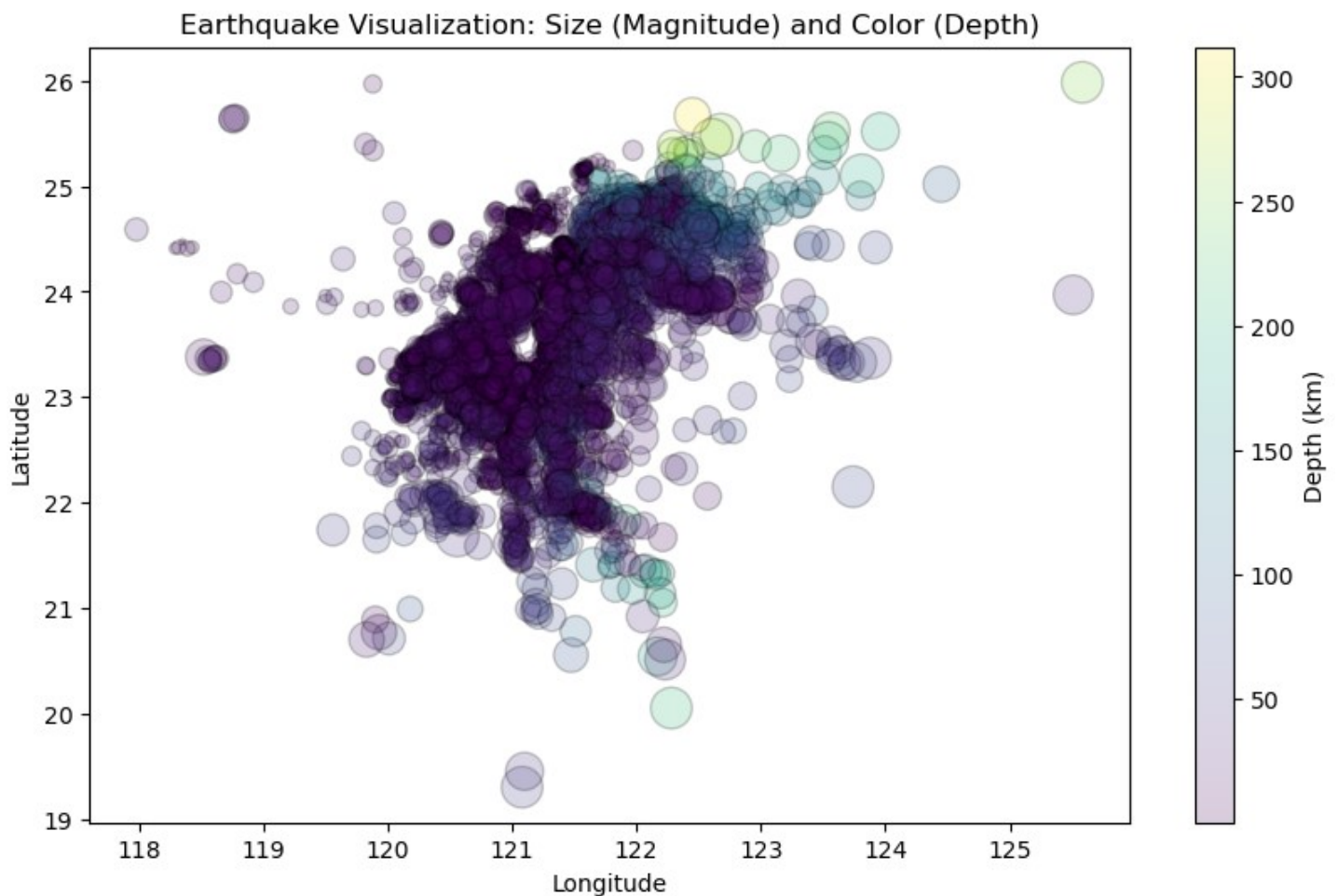
So using a coarser grid and changing the data worked better which works better for regions as opposed to exact

Spatial Kriging Interpolation of Earthquake Magnitudes
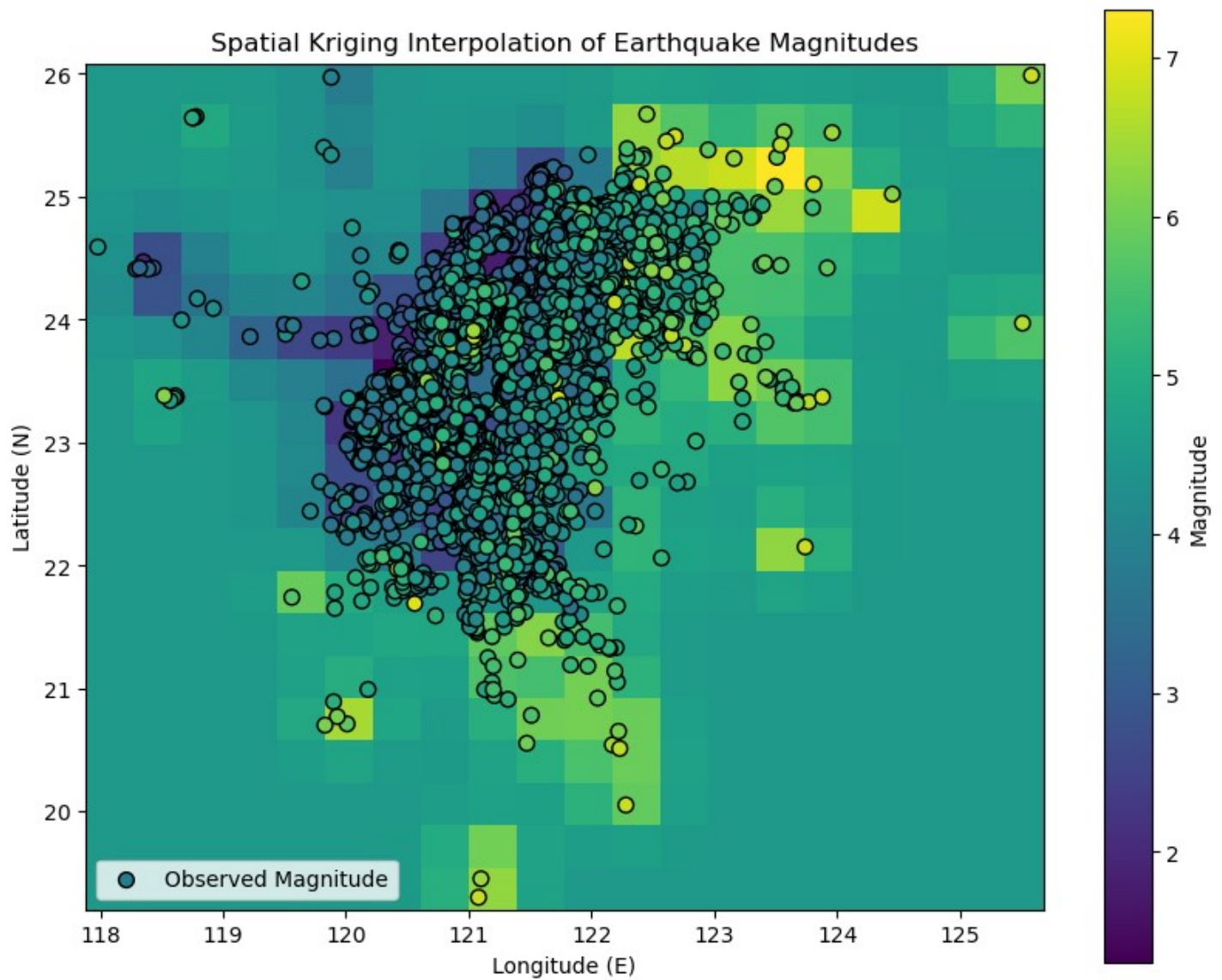
Notes:

- Small Datasets: Kriging requires ~15+ points for reliable results. With only 5 points, consider simpler methods (neighbor).
- Parameter Tuning: Adjust sill, nugget, and range by trial and error. Use ok.variogram_model_parameters to se
- Uncertainty: Results are illustrative only due to limited data.

Practicality

- training time: 3 min
- prediction time: virtually instantaneous

TODO:

- make it work with time data
- try Inverse Distance Weighting model