Moscow Sunset and Sunrise Map

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Project Description

The aim of this project was to compile a Moscow map representing whether a street is appropriate for sunrise (or sunset) observation or not. Final result is based on **street azimuths** which are being compared to monthly solar data. The output is both beautiful and functional, athough the latter still needs to be proved.

What's Under the Hood?

The "artistic path" of this project consists of several steps: data retrieval, data processing, map compilation and post-processing. Rough geospatial data is provided by **OpenStreetMap** community; solar data is computed by employing the *astral* Python package. Another source is *Elevation API* used for additional investigation, which is not included into the visualisations. A set of Python scripts hosted on GitHub provides a straightforward way of building the map on your own (and a precise description of the compilation process can be found in Jupyter notebook).

Examples

January

July

Python packages

- Boeing, G. 2017. *"OSMnx: New Methods for Acquiring, Constructing, Analyzing, and Visualizing Complex Street Networks."* Computers, Environment and Urban Systems. 65, 126-139. doi:10.1016/j.compenvurbsys.2017.05.004
- Kennedy, S. (n. d.) *Astral Python package*. github.com/sffjunkie/astral

Spatial data sources

- OpenStreetMap contributors (2020). *Moscow geospatial data*. openstreetmap.org
- *Elevation api*. (n. d.) elevation-api.io

LaTeX TikZposter