

timeline Documentation

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1 Introduction

2 Requirements

- \geq Python 3.5

3 Dependencies

This section contains a description of all used external dependencies (e.g. libraries) and why they were used in this project. The python dependencies can be installed using `pip`, the Python package manager, using the `requirements.txt` file. It is recommended to use a virtual environment when developing for this project to avoid conflicts with other system-wide installed versions of the same dependencies.

3.1 Back-end (Python)

Flask Flask is a microframework (simple but extendable) for web development. It allows RESTful request dispatching and is well documented. In this project Flask is used for the rendering of the front-end using its template engine and providing an API for the supported visualizations.

Pandas Pandas is a widely used data analysis library. It provides data structures to efficiently store and query in-memory data. All temporal data (i.e. all time series) in this project is stored in Pandas DataFrame or Series objects.

NumPy NumPy is a powerful package for scientific computing. It provides efficient data structures and algorithms to operate on them. However, in this project this library is only used to sample random data for the example data sets and is therefore not very important.

3.2 Front-end (HTML5)

jQuery jQuery is the feature rich JavaScript library to simplify client-side scripting. In this project it is mainly used for AJAX calls.

MetricsGraphics.js MetricsGraphics.js is used to render the time series visualizations. It is based on the well-known D3.js graphic library and provides all necessary primitives and features to plot the required figures.

Bootstrap This CSS framework is used to for its beautiful design templates to provide a familiar and responsive user interface. Furthermore, some bootstrap add-ons were used for additional widgets (e.g. the bootstrap datetime picker).