LM+ @L2F
Brief history of the company

• Founded Sept. 2017 as consultancy boutique

• First open source library Oct. 2019: Giotto-tda

• Second open source library Dec. 2019: Giotto-time

• June 11th 2020: launch of the Giotto Cloud
Main areas of ML expertise

- **Topological Data Analysis**
  - Vietoris-Rips filtrations
  - Simplicial and cubical complexes
  - Mapper algorithm

- **Time Series**
  - Forecasting
  - Correlation analysis
  - Integration with ML and DL

- **Deep Learning**
  - Conjugate DL with TDA
  - New a priori estimations of generalization power
Giotto-tda

Giotto-tda is a high-performance topological machine learning toolbox in Python built on top of scikit-learn and is distributed under the GNU AGPLv3 license. It is part of the Giotto family of open-source projects.

Project genesis

Giotto-tda is the result of a collaborative effort between L2F SA, the Laboratory for Topology and Neuroscience at EPFL, and the Institute of Reconfigurable & Embedded Digital Systems (REDS) of HEIG-VD.

License

Giotto-tda is distributed under the AGPLv3 license. If you need a different distribution license, please contact the L2F team.

Documentation

Please visit https://giotto-ai.github.io/gtda-docs and navigate to the version you are interested in.

Use cases

For a wide selection of use cases and application domains, you can visit this page.

Installation
giootto-time

giootto-time is a machine learning based time series forecasting toolbox in Python. It is part of the Giotto collection of open-source projects and aims to provide feature extraction, analysis, causality testing and forecasting models based on scikit-learn API.

License

giootto-time is distributed under the AGPLv3 license. If you need a different distribution license, please contact the L2F team at business@l2f.ch.

Documentation

- API reference (stable release): https://docs-time.giotto.ai

Getting started

Get started with giotto-time by following the installation steps below. Simple tutorials and real-world use cases can be found in example folder as notebooks.

Installation

User installation

Run this command in your favourite python environment
Organization

R&D

M&S

gtda

Giotto Cloud

gtime
Research projects

• Enhanced stability of deep learning models with topological techniques
• Model validity and a-priori estimations of applicability
• Online Convex Optimization with topological and combinatorial agents
• Topological techniques applied to NLP
• Open to proposals inline with our R&D directions
The end

Thank you for your kind attention!

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