From
17
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2022

09h00
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18h00

2022-T3 GEOMETRY & STATISTICS IN DATA SCIENCES

Geomstats Hackathon

IHP

Geomstats Hackathon
17-21 October 2022 - Institut Henri Poincaré
This hackathon is destined to anyone who is interested in implementations of statistics and learning on nonlinear manifolds. The goal is to gather future and current contributors of the open-source library Geomstats for a few days of collaborative coding. Feel free to contact us at Email or to join us on our slack workspace if you are interested !

About Geomstats

Geomstats is an open-source Python package for computations and statistics on nonlinear manifolds, such as hyperspheres, hyperbolic spaces, Lie groups of transformations, among others. As such, the package supports research within the fast growing field of Geometric (Deep) Learning.

URL of the page: https://www.ihp.fr/en/events/geomstats-hackathon

In this context, Geomstats provides code to fulfill four objectives:

- provide educational support to learn “hands-on” differential geometry and geometric statistics and learning, through its examples and visualizations.
- foster research in differential geometry and geometric statistics by providing operations on manifolds to gain intuition on results of a research paper;
- democratize the use of geometric statistics by implementing user-friendly geometric learning algorithms using Scikit-Learn API; and
- provide a platform to share learning algorithms on manifolds.

The source code is freely available on GitHub. Geomstats has already found numerous applications, for example in the biomedical fields for machine learning applied to biological shape analysis. Typical usecases can be found within the notebooks folder.



INSTITUT HENRI POINCARÉ

Sorbonne Université / CNRS
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TIMETABLE

The institute:
• Monday to Friday from 8:30am to 6pm,
• closed on public holidays.

The museum - Maison Poincaré :
• Monday, Tuesday, Thursday and Friday from 9:30am to 5:30pm,
• Saturday from 10am to 6pm,
• closed on Wednesday and Sunday.