curriculum vitæ of
Paul-Louis DELACOUR
Data scientist interested in theoretical research

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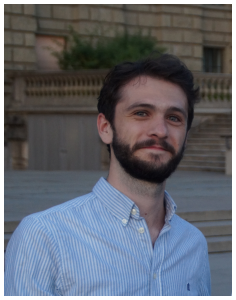
Paul-Louis Delacour



Education

Nov 2022 – **PhD.** in machine learning at Van de Plas Lab. — TU Delft, Netherlands
Focus : Feasibility conditions of machine learning learning algorithms on high-dimensional data.

Sep 2019 – Oct 2022 **MSc.** in Data Science. GPA : 5.25/6.00. — ETH, Zürich , Switzerland
Relevant modules : Advanced Machine Learning, Advanced Algorithms, Optimization for Data Science.
Focus : Theoretical Computer Science and applied Machine Learning for Health Care.

Sep 2016 - Aug 2019 **BSc.** in Communication Systems. GPA : 5.35/6.00. — EPFL, Lausanne, Switzerland
Relevant modules : Machine Learning, Algorithms, Theory of Computation, Probabilities and Statistics.
Focus : Data Science and Theoretical Computer Science.

Sep 2013 – Aug 2016 **Baccalauréat** scientifique option Mathematics. — Lycée du Grésivaudan, Meylan, France
Focus: Mathematics and Physics. Obtained with the Highest distinction.

Research Project

- **Master thesis** in the Theory of Combinatorial Algorithms group at ETH supervised by **Bernd Gärtner**.

  Worked on a the reduction of constrained convex programs to finding the sink in a unique sink orientation of hypercubes. This work has theoretical impacts for high dimensional problems such as finding the smallest enclosing ball of a set of points.
- **Bachelor thesis** in the THL4 algorithmic Lab at EPFL supervised by **Mikhail Kapralov**

  Spectral approximation of large graphs with smaller ones and its impact on clustering.
- **Data Science lab** in prediction of Psychiatric Disorders in a large Pediatric Sample.

  Predicted the severity of psychiatric disorders using EEG Data and efficiently represented those signals as disentangled factors to understand the nature of the information contained.

Applied Machine Learning in Health Care

- **ECG Heartbeat Classification : A Deep transferable Representation**.

  Classified heartbeat diseases, using transfer learning over multiple data sets.
- **Prostate structure segmentation**

  Implemented a modified U-net architecture for segmentation of magnetic resonance images.

Skills

Learning background in `Optimization`, `Advanced Algorithms`, `Advanced Machine Learning` and `Reinforcement Learning`.

Strong knowledge of the programming languages : `Python` , `R` , `C` , `Java` , `Scala` with a focus on parallelism and concurent programming.

Spoken Languages

French : Native language.
English : Fluent speaker, Full Professional Proficiency.
Spanish : Limited Professional Proficiency.