Paul-Louis DELACOUR

DATA SCIENTIST INTERESTED IN THEORETICAL RESEARCH

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EDUCATION

Nov 2022 -

PhD. in machine learning at Van de Plas Lab.

TU Delft, Netherlands

Focus: Machine learning & signal processing algorithms for multimodal molecular imaging

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 concurrent programming.

SPOKEN LANGUAGES

French: Native language.

English: Fluent speaker, Full Professional Proficiency.

Spanish: Limited Professional Proficiency.