

AUDREY

POINSOT

CONTACT INFO

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ABOUT ME

I am a third-year Ph.D. student at INRIA (Paris, France) under the supervision of Marc Shoenauer and Alessandro Leite.

At the **intersection of Causality and Machine Learning**, my current research project aims to improve decision-support tools with a specific interest in **robustness** and **uncertainty**. Having worked as a consultant for a year before starting my Ph.D. funded by this same company, my research is driven by concrete use cases and applications.

My goal is to provide advice and knowledge in order to **democratize the use of causal reasoning in statistical analysis** for decision-making by providing tools to create value easily, sustainably, and fairly.

EXPERIENCE

- DATA SCIENTIST CONSULTANT** 2021-2022
Ekimetrics | Paris, France
- **Interpretability and Time Series:** Decomposition of marketing actions' uplifts with SHAP on predictions of time series revenues
 - **Few-shot Learning in NLP:** Use of semi-supervised methods for Aspect Based Sentiment Analysis applications
- DATA SCIENTIST INTERN** 2020
Schlumberger | Cambridge, UK
- Performed data-driven prognostics for **Survival Analysis**
 - Resulted in the deployment of the solution on more than 14 equipment
- DATA SCAN TOOL ENGINEER INTERN** 2019
Schlumberger | Paris, France
- Build a physical model of signal propagation in transmission lines
 - Applied Machine Learning algorithms to detect and locate failures simulated through the physical transmission line model

EDUCATION

PH.D. STUDENT

2022-today

INRIA Saclay, Paris Saclay University & Ekimetrics | Gif-sur-Yvette, France

- Thesis topic: “**Causal Uncertainty Quantification under Partial Knowledge and Small Data Regimes**”
- Supervised two Master students on **Causal Data Generation** projects
- Collaborated with the **Causal Artificial Intelligence Lab, Columbia University**, New York, during a three-month research visit working with Professor Elias Bareinboim

MSc in Applied Mathematics for Data Science

2020-2021

CentralSupélec, Paris Saclay University | Gif-sur-Yvette, France

- Graduated with a **GPA of 4.2/4, top 5%**
- Thesis in collaboration with the Paris BNP AI Lab: “GNNs for Financial Product Recommendation”

Undergraduate engineering cycle

2017-2019

CentralSupélec, Paris Saclay University | Gif-sur-Yvette, France

- Graduated with a **GPA of 4/4, top 10%**

Preparatory classes

2015-2017

Lycée Pierre de Fermat | Toulouse, France

PUBLICATIONS

Articles

- **A. Poinot**, A. Leite, N. Chesneau, M. Sébag, and M. Schoenauer (2024). “Learning Structural Causal Models through Deep Generative Models: Methods, Guarantees, and Challenges”. *33rd International Joint Conference on Artificial Intelligence, IJCAI 2024*. url: <https://arxiv.org/abs/2405.05025>.
- **A. Poinot** and A. Leite (2023). “A Guide for Practical Use of ADMG Causal Data Augmentation”. *Workshop on the pitfalls of limited data and computation for Trustworthy ML, ICLR 2023*. url: <https://openreview.net/forum?id=kBcAZcKypug>.

CONFERENCES

33RD INTERNATIONAL JOINT CONFERENCE ON ARTIFICIAL INTELLIGENCE (IJCAI)

August 2024

Jeju, South Korea

- Gave a talk, **Learning Structural Causal Models through Deep generative Models**
- Presented a poster

ICLR WORKSHOP ON PITFALLS OF LIMITED DATA AND COMPUTATION FOR TRUSTWORTHY ML

May 2023

Kigali, Rwanda

- Presented a poster

THEMATIC QUARTER ON CAUSALITY

Spring 2023

Paris & Grenoble, France

- Gave a talk, **Reconciling Mix Marketing Modeling and Causal Inference**
- Organised a challenge, **Estimating Marketing Uplifts as Heterogeneous Treatment Effects with Meta-Learners**
- Chaired some sessions
- Presented a poster

ELLIS DOCTORAL SYMPOSIUM

Sept 2022

Alicante, Spain

- Presented a poster

MACHINE LEARNING SUMMER SCHOOL (MLSS22)

June 2022

Krakow, Poland

- Presented a poster

SKILLS

Program Languages

- Professional level: Python (PyTorch, sklearn, numpy, ...)
- Intermediary level: R, Java, C++

Data Science Frameworks

Slurm, Azure Databricks, Dataiku, Google Cloud

Languages

- French (native)
- English (full professional proficiency)
- Spanish (basic)

REFEREES

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