Clément Bénesse | CV

Institut de Mathématiques de Toulouse, 31400 Toulouse (France)

✉ clement.benesse@math.univ-toulouse.fr ● French citizen

Mathematics Ph.D student specialized in Statistics & Machine Learning. Currently working at *Institut de Mathématique de Toulouse*, previously "élève normalien agrégé" at *École Normale Supérieure (ENS) de Lyon*.

Academicals

Ph.D in Applied Mathematics   **IMT & ANITI**
Sensitivity analysis with geometry and dependence for machine learning and fairness   *2019 - Dec. 2022*
Grant given by ENS Lyon and ANITI

M.S in Mathematics: "Maths en Action"   **ENS de Lyon – UCBL**
Specialty: Biostatistics & Environment Sciences   *2019*

Agrégation de mathématiques   **ENS de Lyon**
Option A: Probablitiy & Statistics   *2018*

M.S in Mathematics   **ENS de Lyon**
Concours universtaire   *2015-2017*

B.S in Mathematics with interdisciplinary approach   **CPES-PSL***
Notions in physics & social sciences   *2015*

Papers

○ **Fairness seen as Global Sensitivity Analysis** *2021*

Submitted, arXiv:2103.04613

Talks

○ **52èmes Journée des Statistiques** *"Fairness seen as Global Sensitivity Analysis"*

Around interactions between GSA and Fairness in Machine Learning.
Organised by the Société Française de Statistiques (SFdS).

○ **GDR MASCOT-NUM 2021** *"Fairness seen as Global Sensitivity Analysis"*

Around interactions between GSA and Fairness in Machine Learning.
Organised by the Groupe de Recherche MASCOT-NUM.

Internships

○ **M.S Intership** *"Non-linear dimension reduction for analysis of genomics and "single-cell" data"*

Bibliographical study of non-linear methods for reduction of dimension using kernels when working with genomics and "single-cells" data. *Under the supervision of Franck Picard & Bertrand Michel.*

○ **M.S Project** *"Modelling political abstention"*

Work around the various mathematical models used for political modelling, especially for abstention. *Under the supervision of Morgane Bergot & Thibault Espinasse.*

○ **"Teaching mathematics to parents":** *In collaboration with Gilles Aldon (2018)*

The aim of this one-year teaching was to help parents to better understand mathematical concepts and to be able to transmit their knowledge to their children.

- **M.S Project** *"Tools for supervised classification"*
  Under the supervision of Clément Marteau.

Transverse skills

- **Programming languages:** Python, LaTeX, basic R.
- **Spoken languages:** French (native tongue), English, Spanish (intermediate).