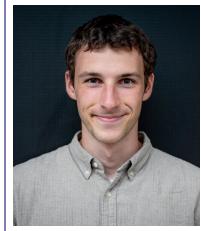


# Auguste Baum

MSc graduate in Data Science at EPFL

- Data privacy ▪ AI safety ▪ Free software ▪ Functional programming ▪

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## Experience

- July 2023— **Participant in Summer of Nix 2023**, *NixOS Foundation*, Paris (remote).
- Oct. 2023
  - Developed Nix package and module for open-source projects, of which Pretalx and Rosenpass.
  - Experienced mob programming, a low-latency work technique enabling fast skill improvement.
- Sept. 2022— **AI research intern**, *Swisscom Digital Lab*, Lausanne.
- March 2023
  - Conducted a research project on explainability of neural networks for big-data tabular datasets.
  - Developed reproducible research pipeline system using pytask.
- 2021—2022 **Co-founder & CTO**, *Resilio*, Lausanne.  
Built the backend of Resilio Tech, an LCA tool for digital sobriety consultancy, in Django.
- 2020—2021 **Digital Sobriety consultant**, *Zero Emission Group, EPFL*, Lausanne.
  - Developed automatic PowerPoint pipeline in Python, speeding up the auditing process by 30%.
  - Co-authored reports on environmental impact of digital technology in multinational companies.

## Education

- 2020—2023 **MSc Data Science**, *EPFL*, Lausanne.  
ML, information security and big data methods. MSc thesis on Explainable AI.
- 2017—2020 **BSc Mathematics & Statistics and Physical Chemistry**, *UCL*, London.  
First class Honours. Dissertation on Machine Learning for chemical property prediction.
- 2016—2017 **Classe préparatoire**, *Lycée Saint-Louis*, Paris.  
Admitted in PC\*. Foundations of Physics, Chemistry, Mathematics and Computer science.

## Projects

- 2022—2023 **MSc project: “Path regularization for continuous counterfactual explanations”**, *Swisscom & EPFL*, Lausanne.  
Developed a novel generative model regularization technique to produce high-quality explanations of deep neural network predictions. Supervised by Prof. Pascal Frossard and Dr Daniel Dobos.
- 2021 **Machine learning project: “Automatic detection of available area for rooftop solar panel installations”**, *EPFL*, Lausanne.  
Built a neural network model to detect the empty space on rooftops in satellite images.
- 2020 **BSc project: “Machine Learning methods for Property Prediction”**, *UCL*, London.  
Reviewed recent approaches to chemical property prediction with machine learning.

## Languages

English and French (native), Spanish (B2), Japanese (basic)

## Skills and tools

*Functional* Haskell, Scala  
*programming*

*ML & Data* Python, PyTorch

*Software development* Git, Vim, Rust, Nix, Golang

*Web development* HTML/CSS, Django

*Object-oriented* Python, Java  
*programming*

*Big data* Spark

*Scientific computing* MATLAB, Mathematica, Sage