

Martin Beaussart

Data Scientist



EDUCATION

Master in Computer Science

École Polytechnique Fédérale de Lausanne

September 2019 - September 2022

Bachelor in Computer Science

University of Geneva

September 2015 - September 2018

EXPERIENCE

Data Scientist in a Digital Health Company

Volv Global SA, Epalinges

January 2023 - Now

- Develop AI models to diagnose people with rare diseases using Electronic medical records (EMRs).
- Create and design data analytics to provide customers with valuable patient and disease information, such as the patient journey.

Data Scientist in an Oncology Department

Centre hospitalier universitaire vaudois (CHUV), Lausanne

January 2022 - August 2022

- Created a method to automatically label cells in hematoxylin and eosin (H&E) images.
- Improved model accuracy with an average of 94%, compared to a maximum of 78% at the beginning of the project.
- Improve project time complexity from exponential to linear, resulting in a 27 times faster process.

PUBLICATION

Overcoming Racial and Ethnic Biases in the Diagnosis of Patients With Alpha-1 Antitrypsin Deficiency in the United States Using a Machine-Learning Model

American Thoracic Society 2024 International Conference

May 2024

- Poster in collaboration with Volv Global and Takeda about overcoming racial and ethnic biases in the diagnosis of patients with Alpha-1 Antitrypsin Deficiency in the United States using a Machine-Learning model.
- Link:

CONTACT

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GENERAL SKILLS

- Machine Learning
- Deep Learning
- Data Visualization
- Data Cleaning
- Data Analysis

TECHNICAL SKILLS

- D3
- Elastic
- Git
- Kedro
- Kibana
- Linux
- Numpy
- OpenCV
- Pandas
- PIL
- Plotly
- Polars
- Python
- Pytorch
- QuPath
- Scikit-Learn
- SQL
- Snowflake

https://www.volv.global/files/ATS-24-Volv-Race-and-Ethnicity-Poster_Final_13MAY2024.pdf

WAFFLE: Weighted Averaging for Personalized Federated Learning

NeurIPS 2021 Workshop on New Frontiers in Federated Learning: Privacy, Fairness, Robustness, Personalization and Data Ownership

December 2021

- First author of a published scientific paper in a NeurIPS workshop on a Personalized Federated Learning method I invented.
- The new method shows a faster convergence and an improvement in accuracy compared with other personalized FL methods.
- Link: <https://arxiv.org/abs/2110.06978>

PROJECTS

Gender disparities in police stops

January 2021

Analysis and visualization of law enforcement data in the United States to assess potential gender bias among drivers. This analysis is done by analyzing data in multiple states or cities across the United States.

- Link: https://martinbeaussart.github.io/usa_gender_disparities_police

Exploring the crimes in Chicago from 2001 to 2019

May 2020

Visualization of Chicago crimes data from 2001 to 2019. The project involved complex visualizations using D3.js and Leaflet.

- Link: <https://com-480-data-visualization.github.io/com-480-project-improviz>

A Meathic Story of Europe

January 2020

Data analysis and data visualization on the meat consumption in Europe and the relation with the economy and the coverage of climate change in the media.

- Link: <https://martinbeaussart.github.io/DataStoryMeatConsumption>

VOLUNTEERING

- President of the Computer Science Student Association, University of Geneva - 2018

HOBBIES

- Paragliding
- Rowing
- Photography
- Hiking
- Cinema

LANGUAGES

English: C1 Certificate in Advanced English (CAE)

French: Native