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GENEVA CENTRE FOR PHILANTHROPY

unige.ch/philanthropy

PHILANTHROPY SERIES

Data-driven philanthropy, hosted by Edmond de Rothschild Foundations Chair in Behavioural Philanthropy

With Prof. Giuseppe Ugazio

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Defining Behavioral Philanthropy

> "A discipline that generates theoretical models that allow to generate mechanistic explanations of philanthropic behavior"
>
> (Bernardic, … & Ugazio, 2021)

Philanthropic behavior: voluntary giving of private resources for the common good

Modeling the role of three main components:

- Moral values
- Financial Motives
- Emotional & Psychological Processes

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Teaching Philanthropy

Bachelor in Economics

- The Many Faces of Philanthropy

Master in Responsible Management

- Innovation and Philanthropy

Executive Education

- DAS/CAS Strategic and Operational Philanthropy
- Behavioral Finance and Philanthropy

Investigating Philanthropy

Cognitive Psychology

Behavioral/Neuro Economics and Finance

- How do we assign value to choice-options

with Berrada & Bossaerts, *in progress*; Bernardic & Lebreton, *in progress*; Ugazio et al., *2021*

- How do moral values guide our behavior

with Mitali & Kruger, *in progress*; Lombard et al., *in progress*; Sooter & Gibson, *under review*; Sooter et al., *under review*

- What affects moral behavior

with Bernardic et al., *in progress*; Zucchelli & Ugazio *2019*; Tudor et al. *2022*; Sooter & Ugazio, *2023*

- Using big data & AI to assist decisions

with Gomez, *in progress*; Carneiro et al., *in progress*; Tudor et al., *forthcoming 2023*; Maricic, *forthcoming 2024*

- How do we take risks

with Tugnoli et al., *in progress*

Emotions and Physiology

Big Data, Machine Learning, and AI

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Thanks to the Behavioral Philanthropy Lab Team

Post-doctoral Researchers

Lucia Gomez
Anita Budziszewska

Bachelor - Master Students

Maria Tudor
Nicolas Piron
Nisa Thomas
Vinicius Marignac

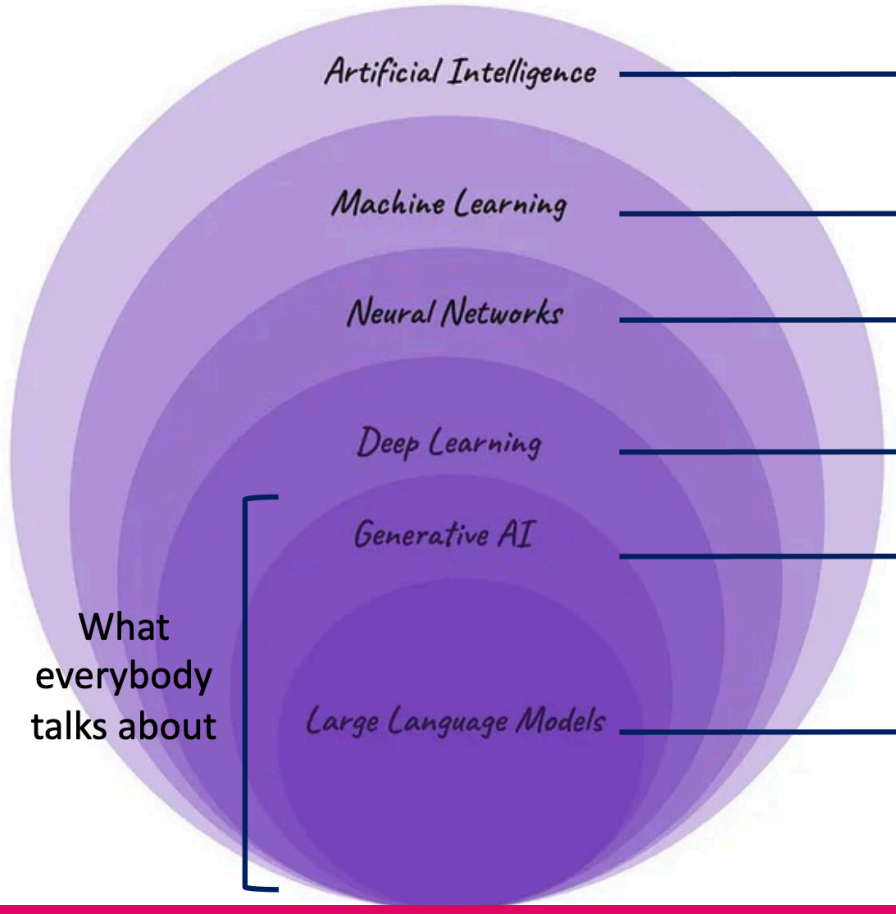
PhD Students

Nina Sooter
Teerawat Monnor
Hubert Halope
Camilla Della Giovampaola

Alumni

Ursa Bernardic, PhD
(now post-doc at ETH Zurich)
Carlos Rey
Marco Lourenco
Paulo Carneiro
Konstantin Toussas

Big Data, Machine Learning, and AI



Brach of Computer Science that aims at developing machines that think and act like humans.

Subfield of AI aiming at developing and training models able to learn from data without giving explicit instructions. Includes Supervised, Unsupervised and Reinforcement Learning

Subtype of ML models which architecture is inspired in the human brain as it is composed of connected artificial neurons.

Subset of NNs counting with Hidden Layers allowing to learn beyond linear patterns and tackle complex problems.

Seminar

Subtype of DL models specialized in generating new and realistic content because of being trained in Very Big Data.

Generative AI models able to create human-like text based on the patterns learned from vast amounts of textual data.

Workshop

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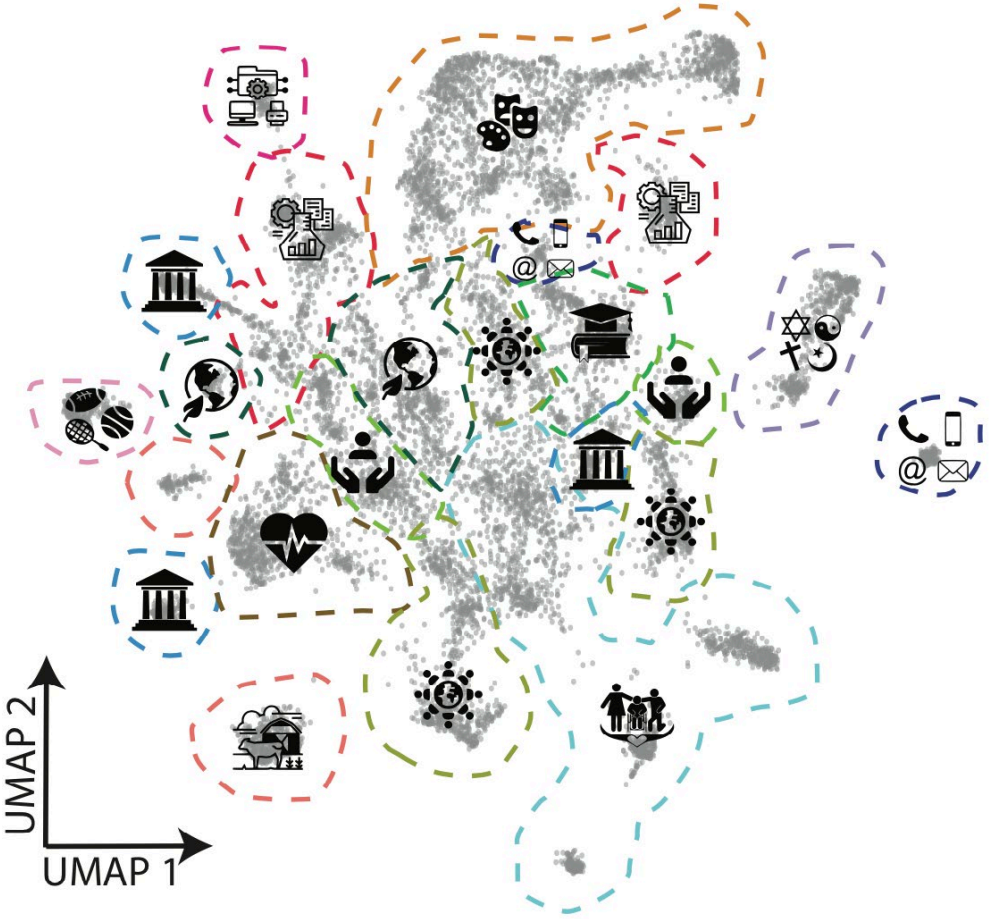
Mapping Swiss Philanthropy

Creating a Big Dataset

1. Collected mission statements from ≈ 13.000 POs
2. Data prepared to be analyzed for Natural Language Processing
3. Identified 19636 unique and meaningful words from 12766 POs



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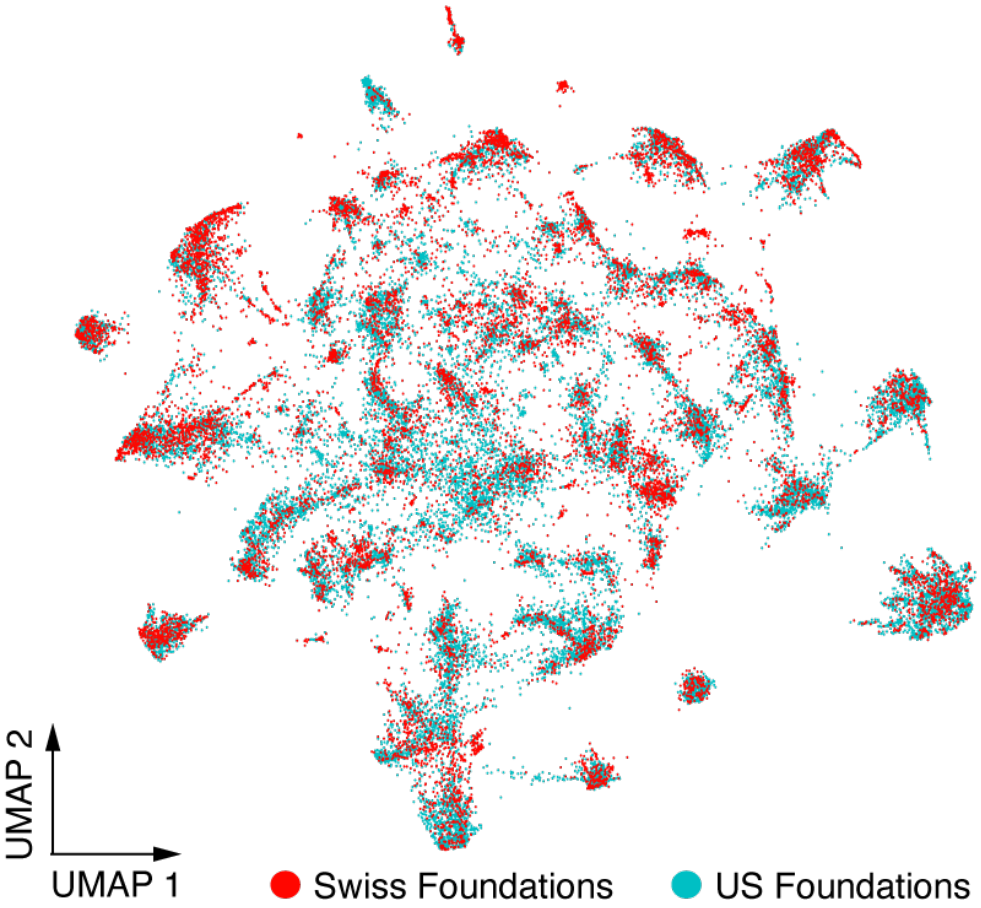
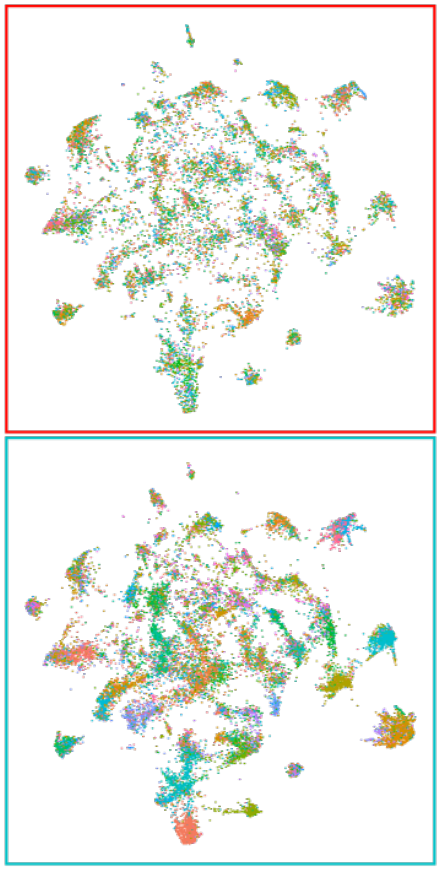
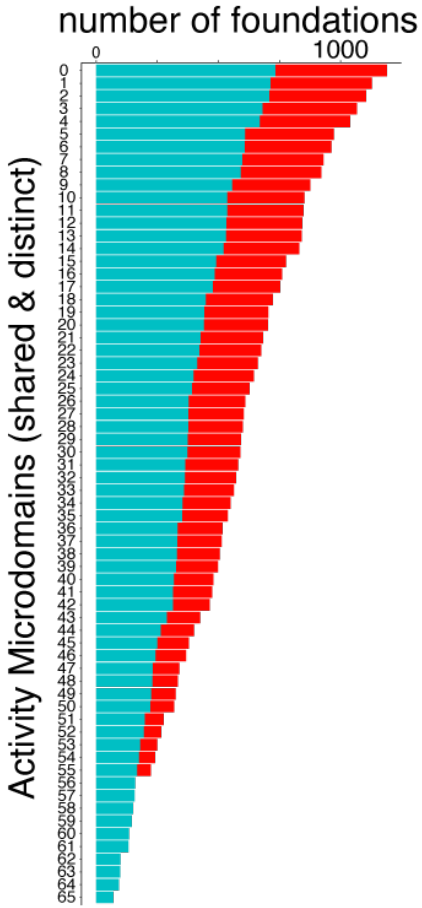
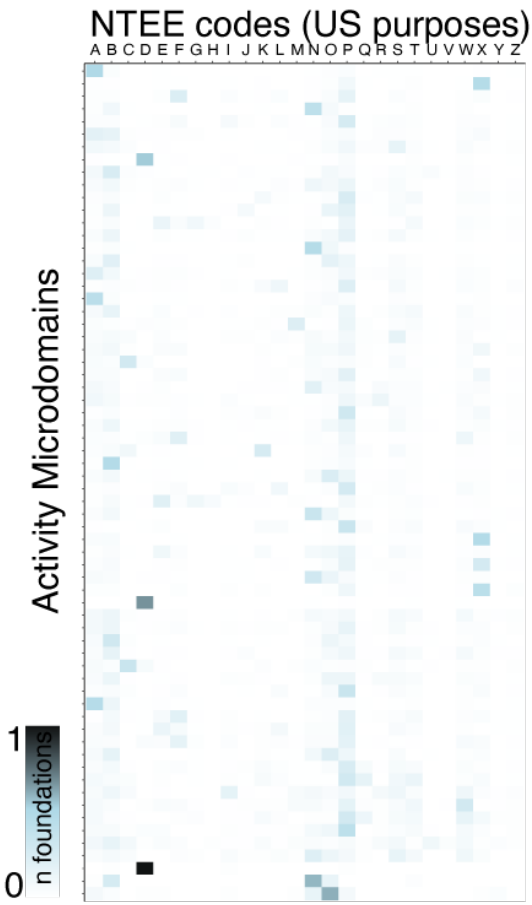
Mapping Philanthropy: Expanding the Dataset and Validating Results

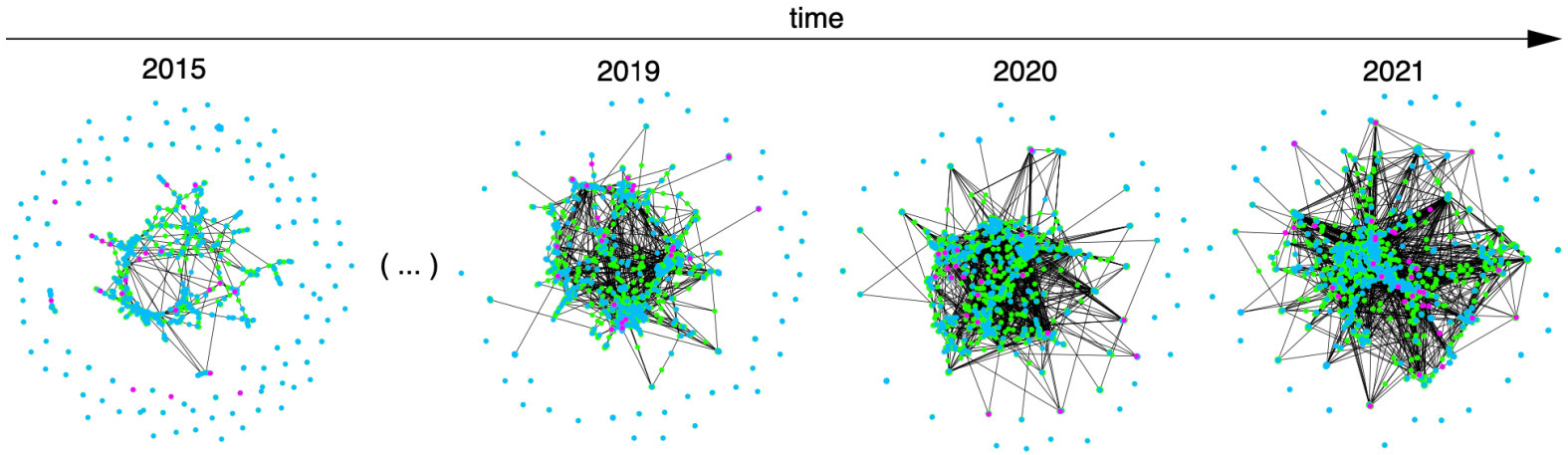


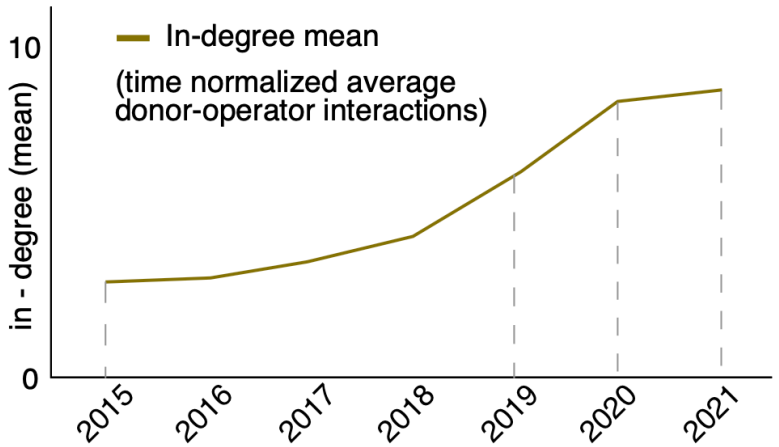


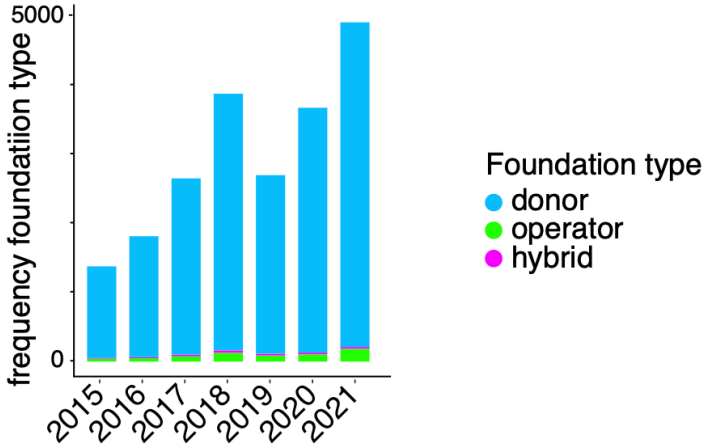




Mapping Philanthropy: Identifying networks through financial interactions







Detectable interactions increase over time:

- More transparency/reporting?
- More transactions?

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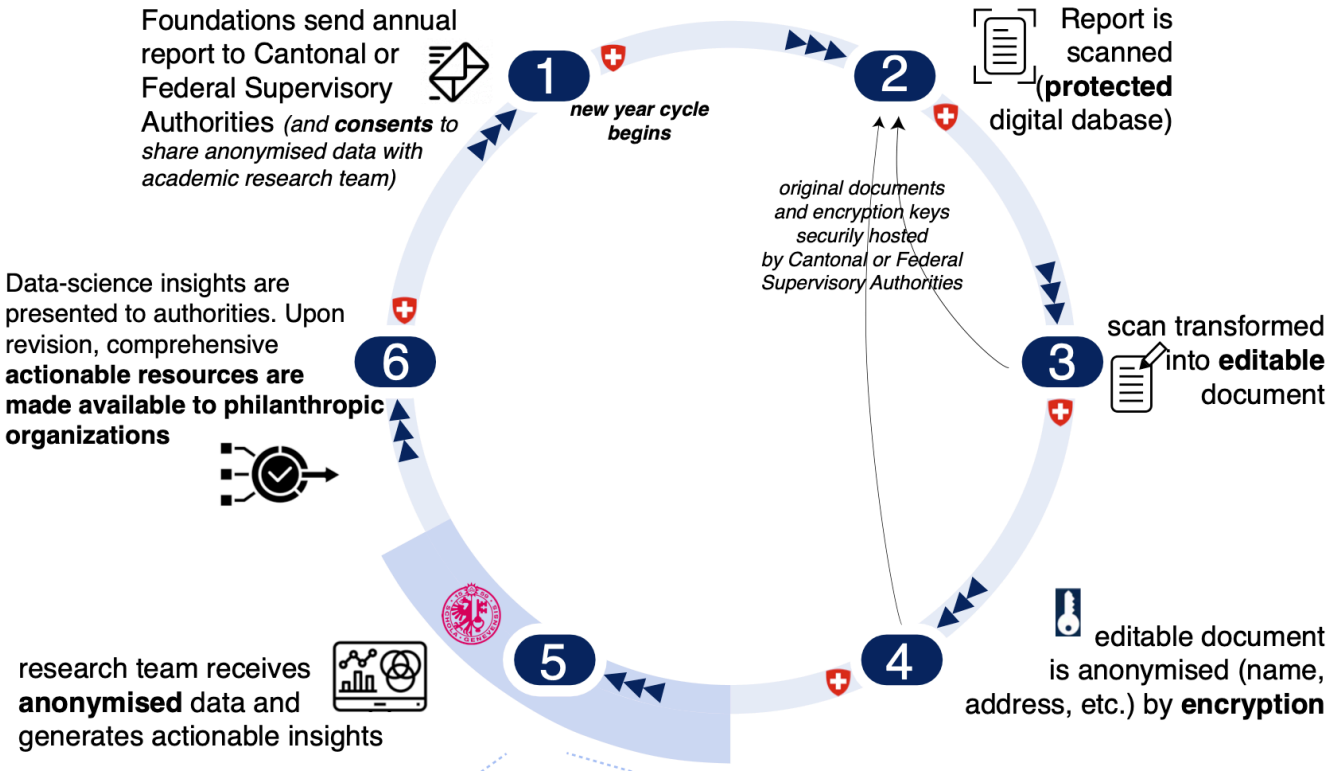
Improving the Map: join our endeavor!

Collecting and Analyzing annual reports to extract more accurate patterns in philanthropic operations



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Modelling Giving through Big Data

SWISS SOLIDARITY

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Pre-processing Data

1'048'575 observations

Remove Duplicates
Remove Missing Values

497’965 Observations

Courtesy Titles

Baugeschaeft	Dr.	Dr. med.	Erbengemeinschaft	f
Fam.	Fmaily	Hanfl\xe4nderweg	IMMO-11 GmbH	Mister
Messrs.	Michel	Mis	Miser	Mises
Miss	Missea	Missees	Misser	Mist
Mistre	Mkiss	Mkist	Mmiss	Monsieur
Mr	Mr.	Mr. and Ms.	Mrs	Ms
Ms.	Mses.	Msit	Msiut	none

Donors Gender Profiles

Male	Female	Family

Variables Selected

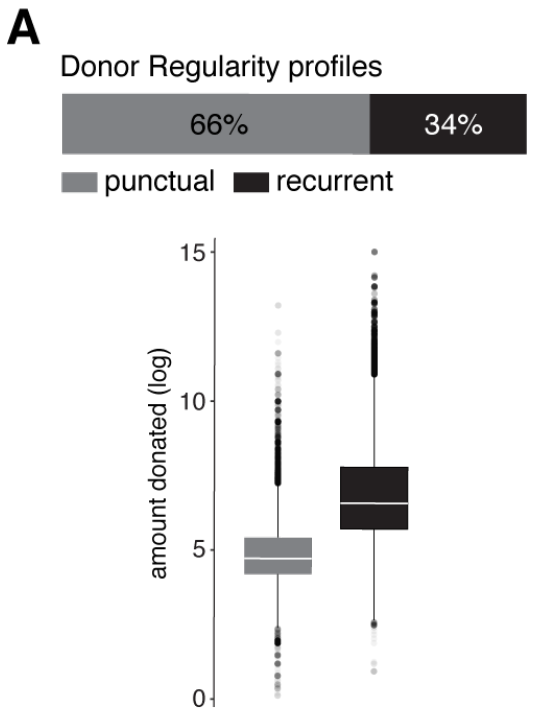
Donors (anonymized unique ID)

- Gender
- Geographical location
- Subscription to newsletter
- Number of donations
- Total amount given

Donations:

- Amount
- Date
- Campaign attached (determined by date)
- Campaign Level

Descriptive Results – Donor Profiles



- More punctual donors than recurrent
- Larger amounts by recurrent than punctual donors
- More unsubscribed donors but similar amounts of gifts
- More Female donors but higher donations by males
- **We focus only on Punctual donors**

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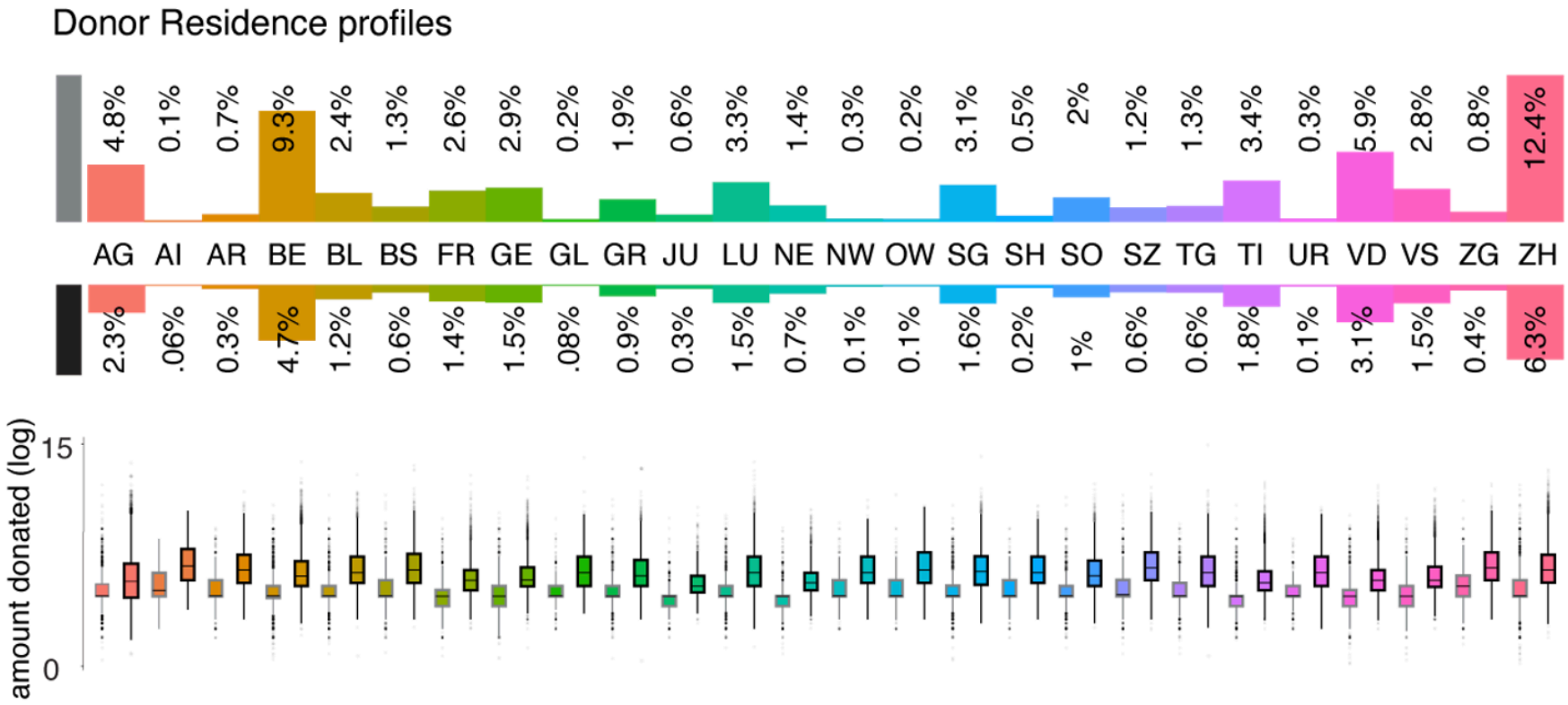
Descriptive Results – Donor Geolocation

A



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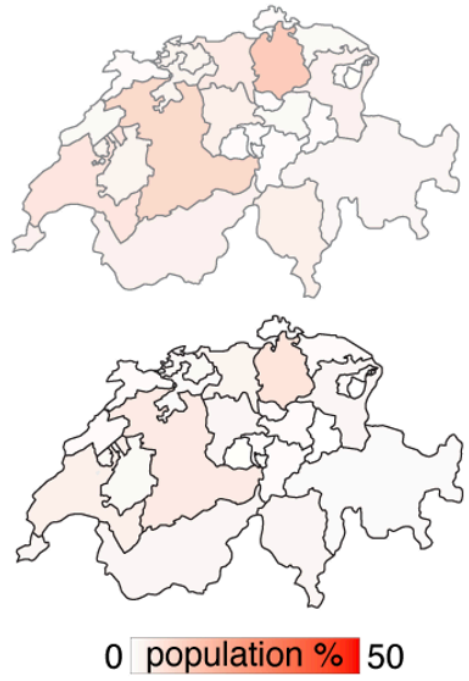

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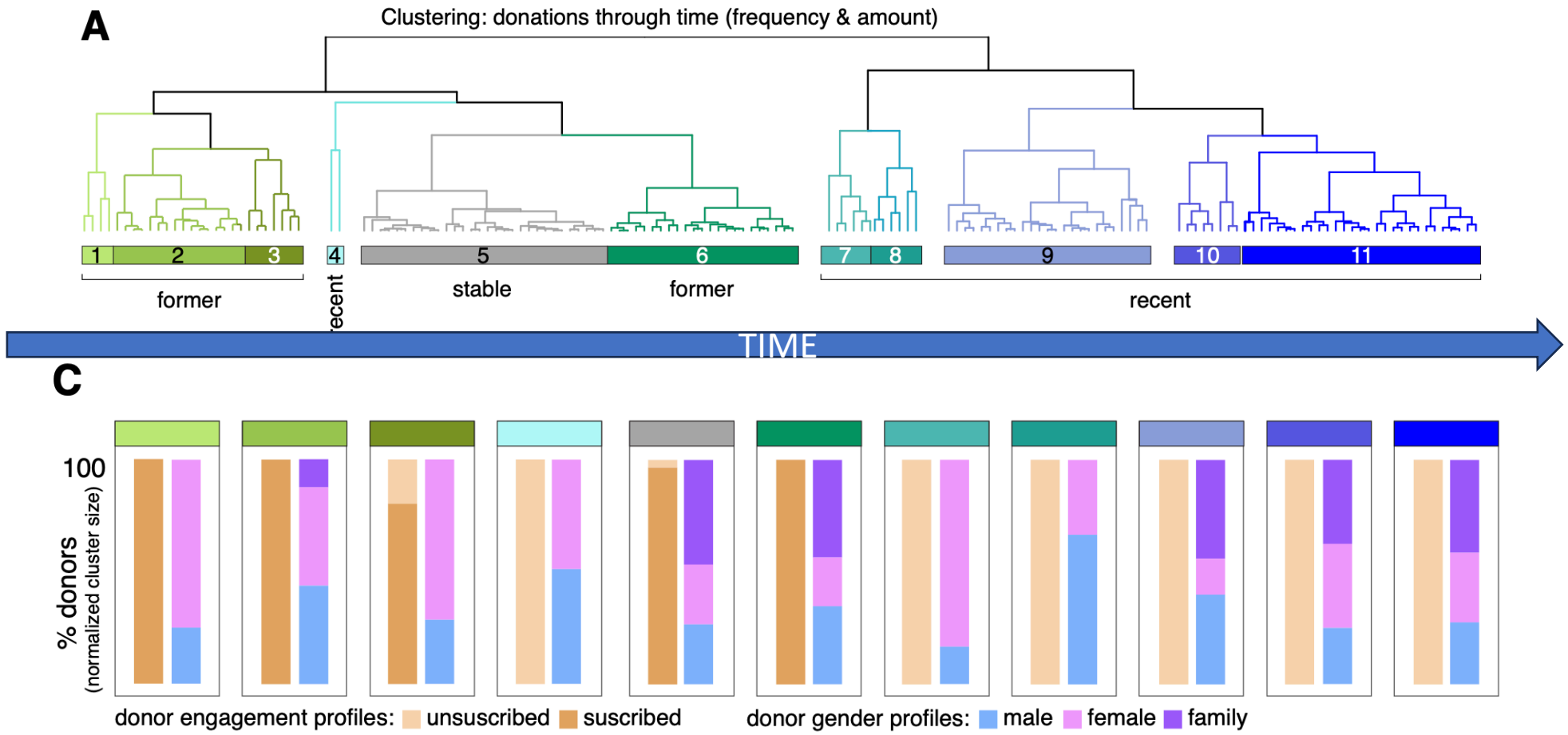
Temporal clustering: three groups of givers



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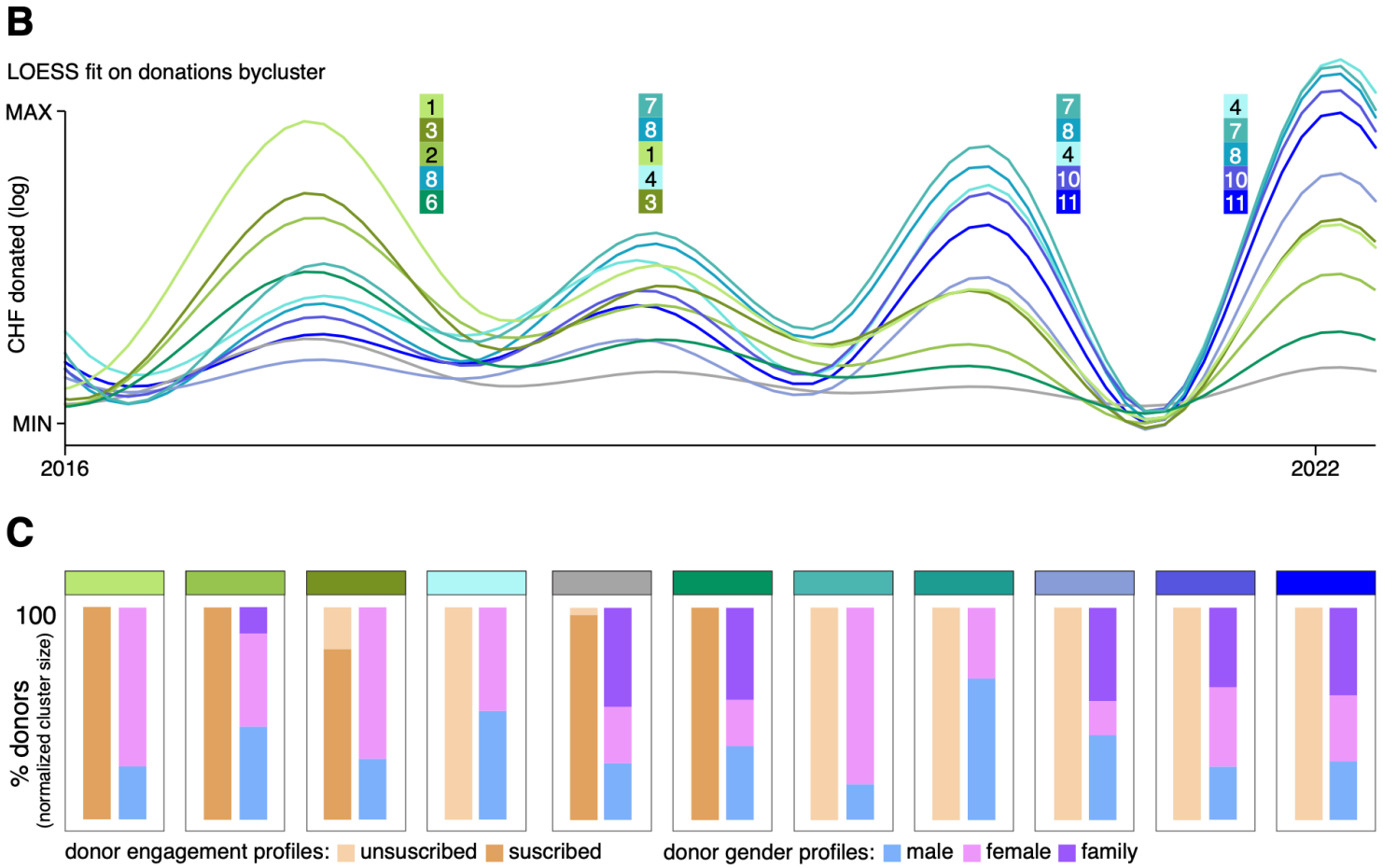

- Stable Givers: Subscribers and Family
- Early Givers: Subscribers and Female
- Recent Givers: Non-Subscribed mix all genders

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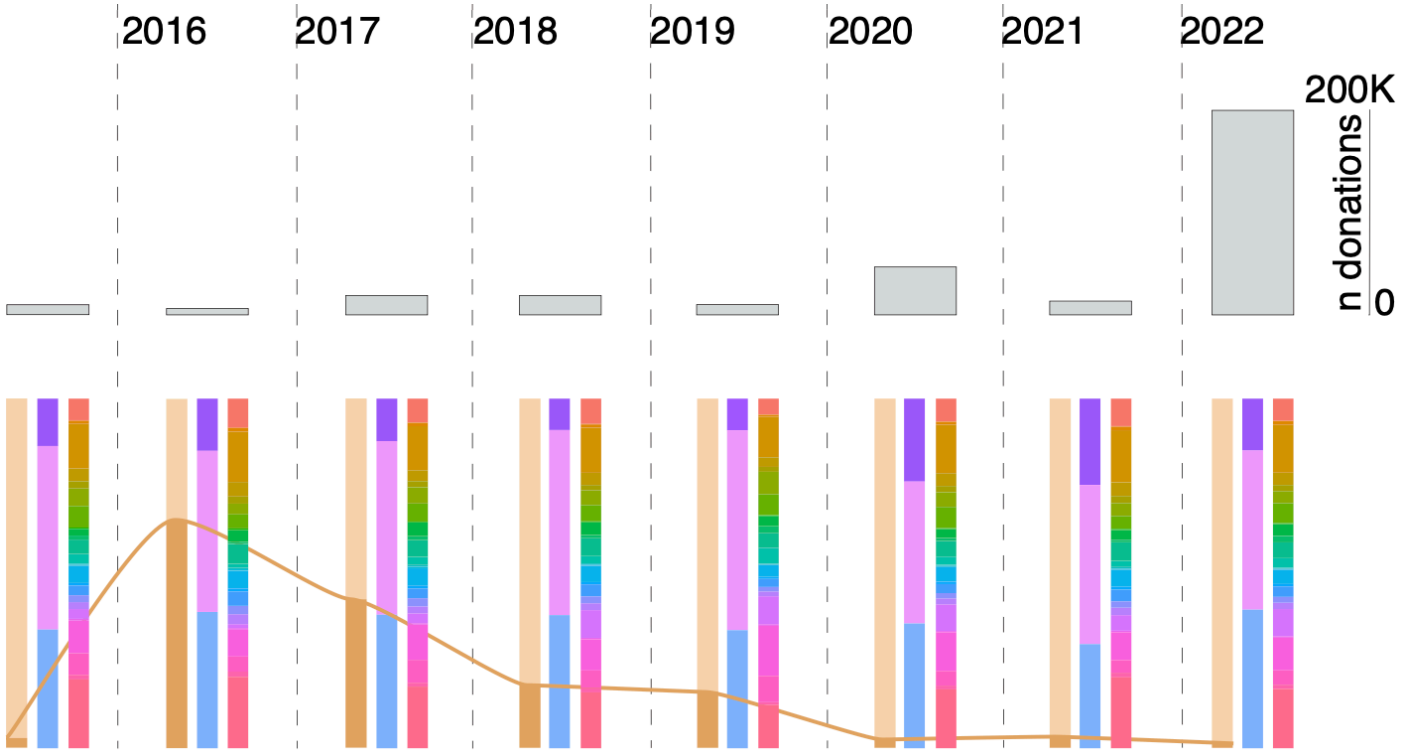
Descriptive Results: giving through time and regions



- Geographical origins of gifts evolve in time
- ZH residents constantly large donors

donor residence: AG AI AR BE BL BS FR GE GL GR JU LU NE NW OW SG SH SO SZ TG TI UR VD VS ZG ZH

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Predicting Giving: Donors vary, amounts don't

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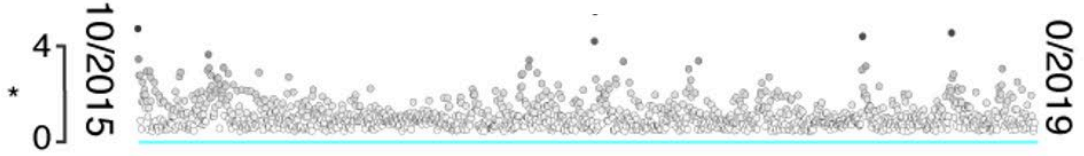

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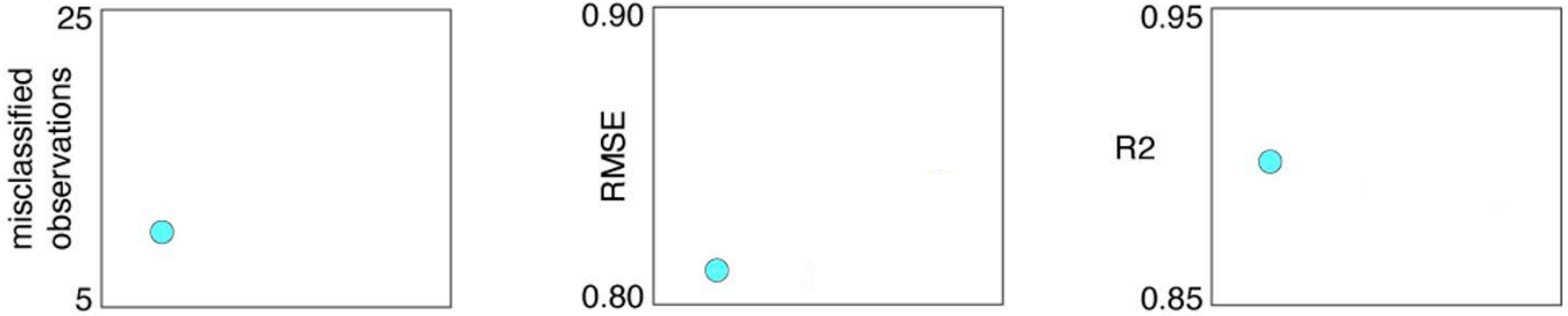

- Amounts donated to Swiss Solidarity predictable
- Unless there is a "crisis"

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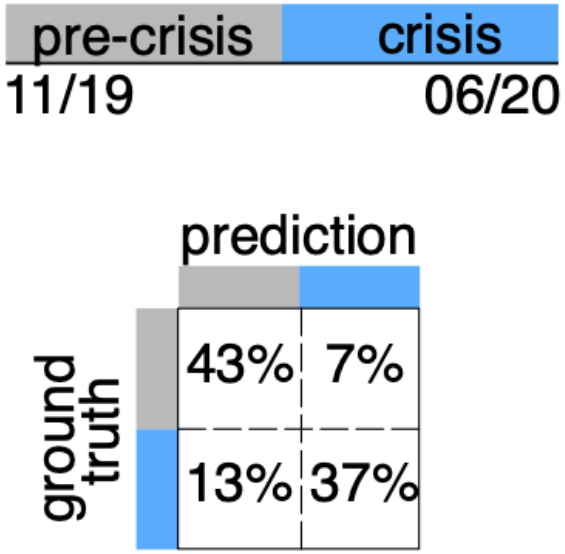
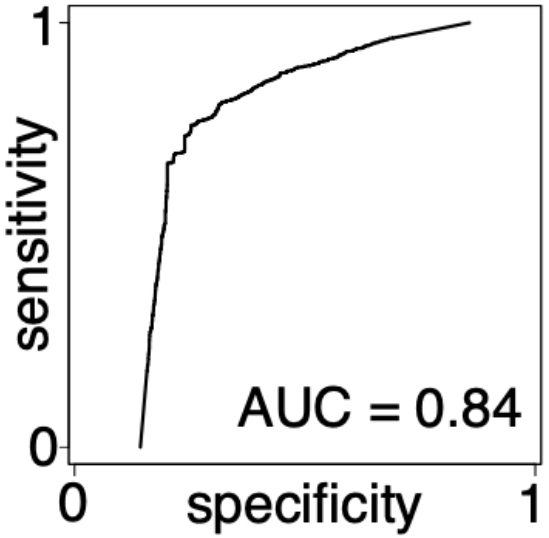
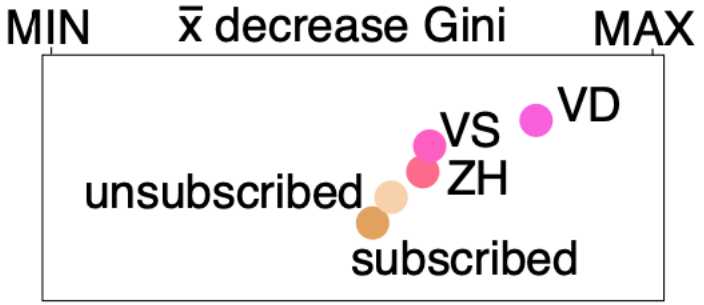
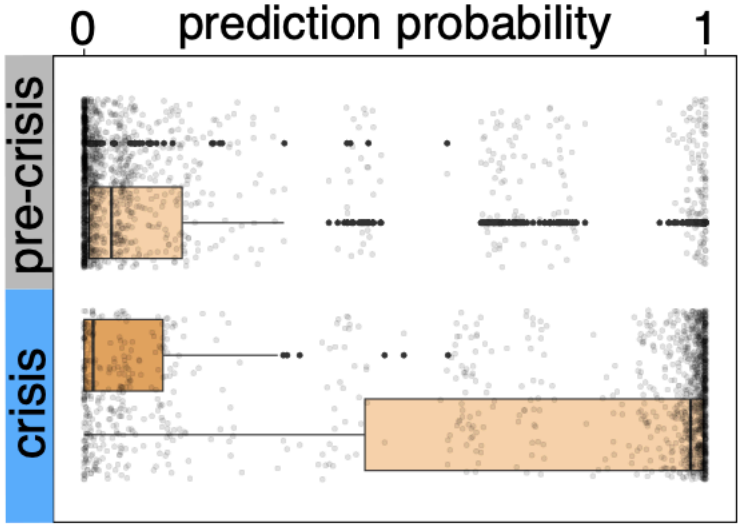
Giving in times of Covid-19









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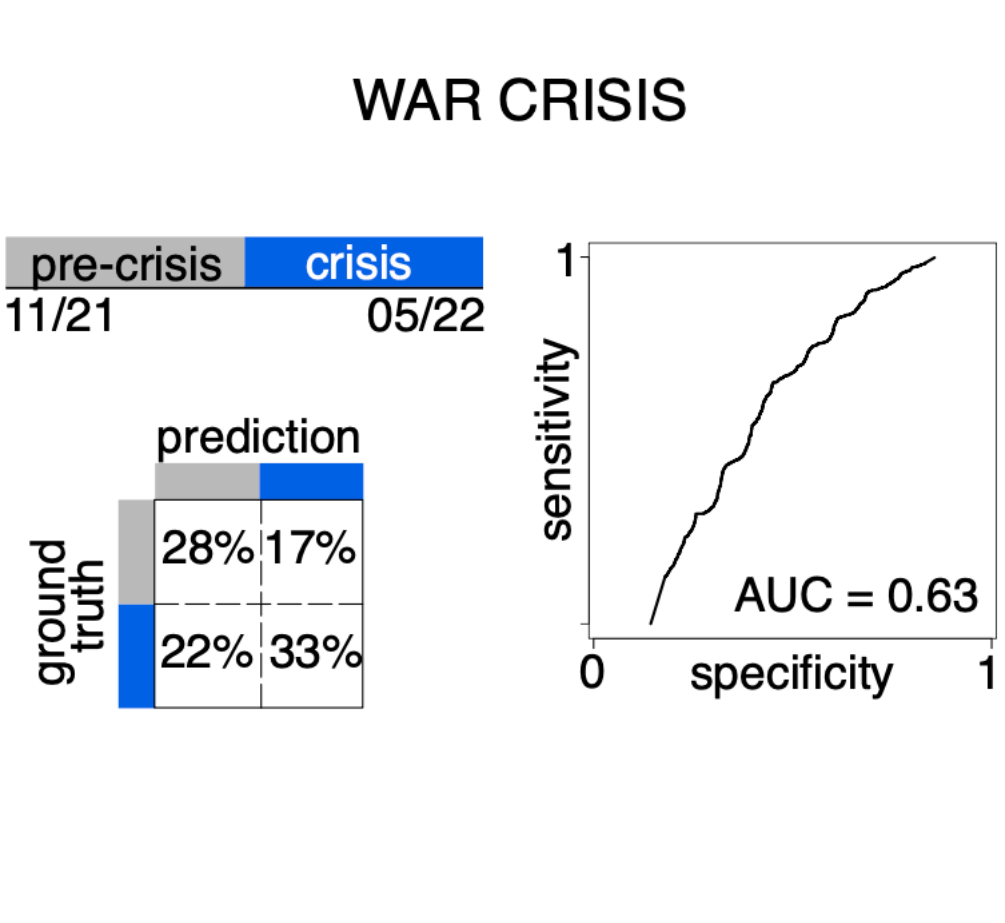
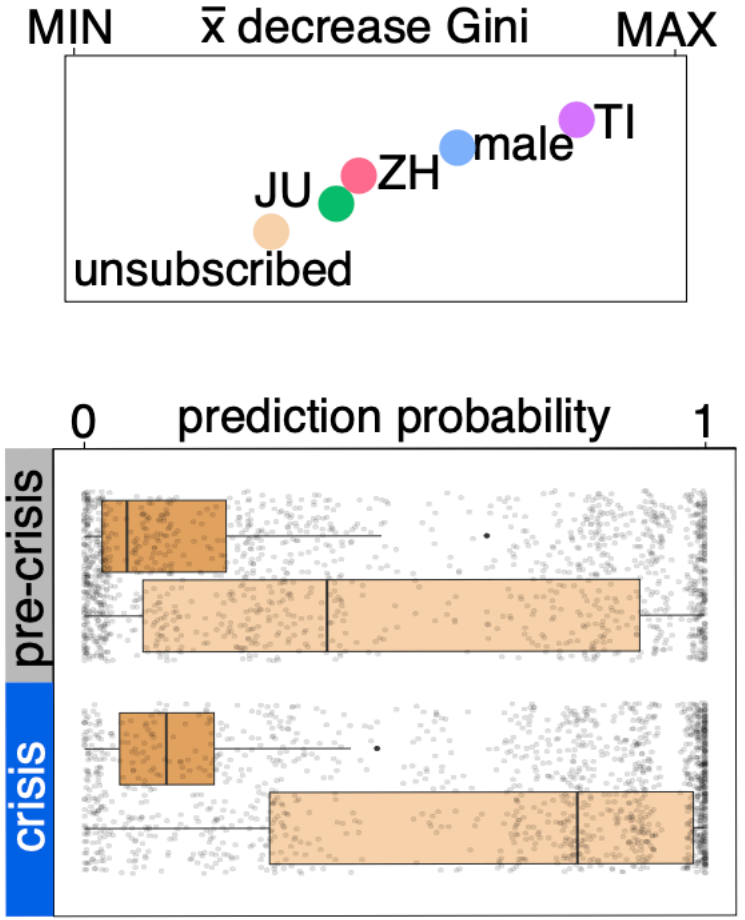
Giving in times of War in Ukraine





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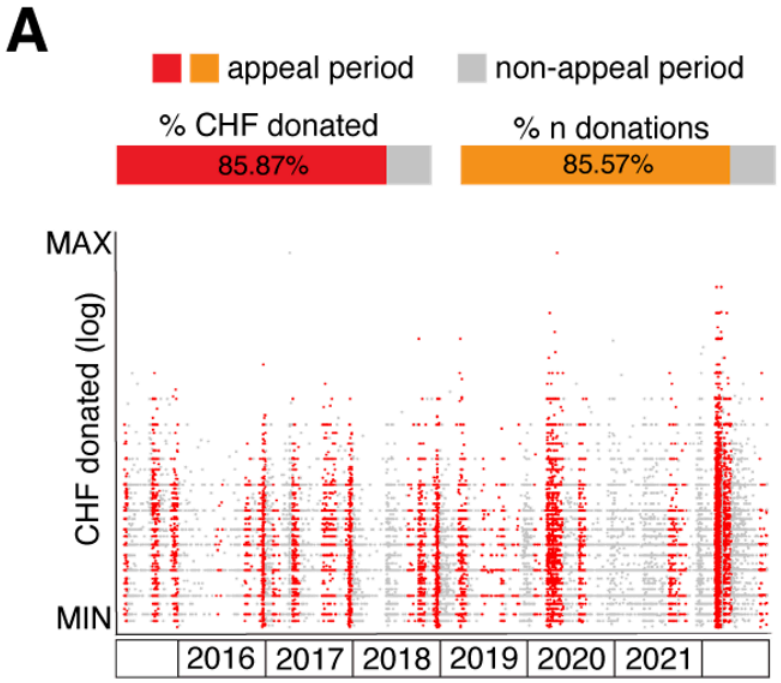
Donations are sensitive to appeals' strength



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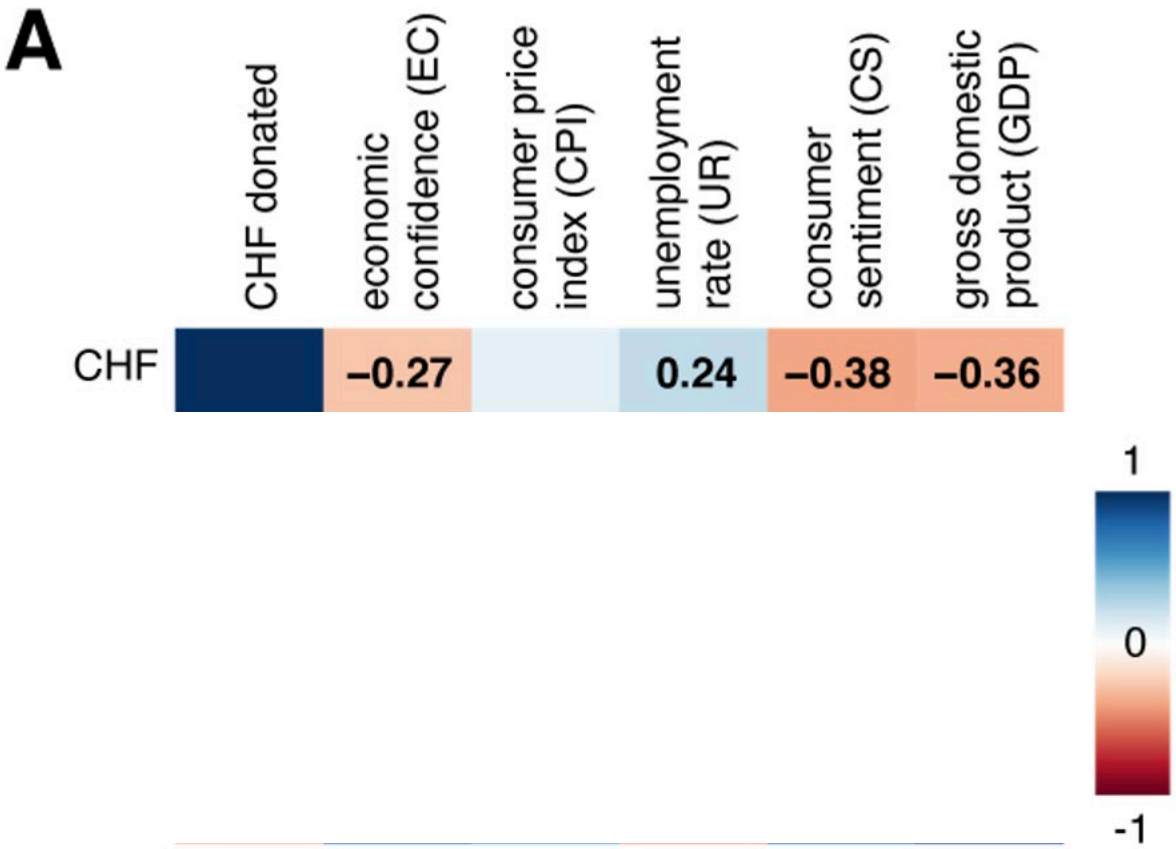
Socio-economic trends and donations



- People give less when the macro-economic conditions are worse
- But surprisingly give more when unemployment is higher

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Questions?

- **Data-driven decision-making:** Collecting and analyzing data on philanthropy is instrumental in optimizing operations and designing strategies.

- **Ride the Waves of Change:** Donor engagement is in constant evolution: who and when are equally important. Understanding the temporal fluctuations shaping the contributions of major societal charitable giving forces is crucial for informing and designing successful fundraising strategies.

- **Media-Magic:** Mass-media outreach is nowadays a very powerful strategy for attracting new donors whose values are aligned with specific philanthropic missions.

THANK YOU FOR YOUR ATTENTION

EVALUATION

For those who will not be able to participate in the workshop, you can already complete the evaluation survey:

https://unige.ch/-/philanthropy/29nov

WORKSHOP
HOW TO USE LARGE LANGUAGE MODELS TO SUPPORT THE PHILANTHROPIC WORK

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WORKSHOP

Prof. **Giuseppe Ugazio,**
Assistant Professor & holder of the **Edmond de Rothschild Foundations Chair in Behavioural Philanthropy,**
GSEM, UNIGE

Dr. **Lucia Gomez,**
Behavioral Philanthropy Lab, GFRI, GSEM, UNIGE

Nisa Thomas,
BSc in Computer Science, UNIGE

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CONCLUSION

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EVALUATION

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