

Hartstichting (Dutch Heart Foundation) Case

The Dutch Heart Foundation is a not-for-profit organisation that is committed to combating heart and vascular diseases. It does this not only by providing information and support to patients but also by funding scientific research. The Dutch Heart Foundation as a Non-Governmental Organisation (NGO) depends on volunteers and donors to raise millions of euros to realise our strategy. Therefore, several fundraising campaigns are organised. Every year, a selection of approximately 40.000 former donors of the Heart Foundation is approached by Direct Mail with the request to consider donating again to the Heart Foundation. About 3,5% of them are prepared to donate again. This year we are presenting you with the unique opportunity to work on the case provided by this impactful organisation to put your econometrics and marketing knowledge into practice. The main goal of the case is to develop a scoring model to improve the selection process of potential donors, basing your findings on the results of previous campaigns.

UNICEF Case

As one of the world's largest providers of vaccines worldwide, UNICEF supports child health and nutrition, safe water and sanitation, quality education, HIV prevention and the protection of children and adolescents from violence and exploitation. This year we are presenting you with the unique opportunity to work on the case provided by this impactful organisation to put your econometrics and marketing knowledge into practice. The main idea of the case is to find an optimal amount of times to reach donors via combined channels such as mail, email and telemarketing campaigns. Your group will have an opportunity to develop an optimal strategy taking into account the complex joint effect of three channels on donors.

Wisselbank Case

The Amsterdam Wisselbank (AWB) was the most important bank in Northwestern Europe and arguably the world for most of the 17th and 18th centuries. The AWB records are amazingly intact and housed in the Stadsarchief Amsterdam, with transaction-level detail still conserved for hundreds of thousands of pages of records. Researchers anticipate being able to unearth a multitude of crucial relationships and significant insights from this archive. To date, its immense scale and delicate condition have posed challenges for access, resulting in only surface-level exploration.

In this project, you will work on a sample of the archive's data which has been digitised (>30.000 transactions, including main actors in the financial network of that time). In addition to the transactional data, researchers from the Netherlands and US have identified characteristics of the different accounts and their affiliations to financial, societal and religious groups. The goal of the project is twofold:

- discover insights into the historical financial dynamics either at a granular (per account) or sectoral level (per group).

- present these in a way which showcases the potential of digitising further the archive and attracts more funds for the research.

To do this, you will build upon the work done by ADC (Data and AI consultancy) and leverage tools that allow for advanced network analysis and visualisations: Graph databases, Python and R (which currently has more advanced network visualisation toolkits than Python). In these projects you will also combine data science tasks with consultancy skills: identify goals and technical challenges, communicate clearly with your client and present deliverables so that they can make the most of them.

Potentially, It is possible to combine the end of the project with a seminar/presentation with data scientists of the New York Federal bank, who share our interest for the potential of network analysis and visualisation.

Wij.land Case

Wij.land is a NGO that promotes a healthy and resilient peat meadow landscape where agriculture and nature come together in sustainable business models. Wij.land works together with a growing network of >300 farmers, nature organisations, entrepreneurs and other stakeholders on the transition towards a landscape where multiple returns are created; inspiration, social capital, natural capital and financial capital. It originated from Commonland in 2016 and embraces and implements the 4 returns approach.

At the core of its work Wij.land is supporting farmers in transitioning towards regenerative practices, through various projects and experiments. Both on farm practices as well as business models. These projects are increasingly becoming data-intensive. Several tools have been developed, as well as software supporting these tools and the database. At its core, there is a growing demand for farm performance tooling and scenario building. The main goal of the case is to support and advice Wij.land in their data strategy, database architecture and process, by focusing on two data-intensive projects as use cases; the Boerenwijzer and the Klimaatboeren project in which carbon credits are generated.

SOS Kinderdorpen Case

At SOS Kinderdorpen (SOS Children's Villages), it is our mission to ensure that every child and young person grows up in a strong family and safe environment, and can develop into an independent adult. To maximise impact with limited resources, we are continuously working on making our fundraising strategies more effective by employing a data-driven approach.

We distinguish certain types of donors based on their donation behaviour. Each and every donor is valuable to our organization and mission. In this project, you will focus on the so-called *major donors* (high-value donors) characterized by their high-value contributions. The primary objective of the project is to predict the likelihood of an existing donor entering the *major donor* segment using a scoring model. This will help us to tailor our fundraising campaigns and understand even more about our donor base.

You will be working with (of course highly anonymized) data on historical donor behaviour and engagement patterns. Think originating marketing channel (door-to-door, search engines, ...), e-mail engagement, response to postal outings, donations on certain topics, and much more. Let's explore together which features might help!