

# CORRELCON 2020

NOVEMBER 6-8

A WEEKEND FOR DATA4GOOD

NOVEMBER 6

Please note that times are given in UTC+01:00

5:00PM–5:30PM · Stage · Input (30min)

## KEYNOTE: INTRODUCTION TO DATA4GOOD

Our founder Johannes Müller will share insights on the current state and the future of Data4Good, CorrelAid e.V.'s vision for society, data and tech and how we strive to achieve it.

Speaker: Johannes (CorrelAid e.V.)

5:30PM–5:45PM · Stage · Input (15min)

## DATA4GOOD PROJECTS

Frie Preu, Head of Operations, will introduce our mission, terms, conditions and timelines in Data4Good projects.

Speaker: Frie (CorrelAid e.V.)

5:45PM–6:30PM · Sessions · Input (30min), Q&A (15min)

## DATA4GOOD USE CASES

### SESSION #1: DETECTING ANOMALIES IN BEE HIVES WITH MACHINE LEARNING

Bees are crucial for the preservation of life on earth in its current form. We helped taking bee observation and research to the next step by making sensor data usable and building an alarm system that alerts bee keepers in case of emergencies. Diren, Alex and Alex will share how they trained machine learning models for anomaly detection and walk you through the process of conducting a Data4Good project.

Speakers: Diren (Bee Server BOB), Alex and Alex (CorrelAid e.V.), Moderator: Frie (CorrelAid e.V.)

### SESSION #2: BUILDING INTERACTIVE DASHBOARDS WITH RSHINY

RShiny is a technology enabling the visualisation of data in interactive dashboards. Based on the programming language R, it comes with server solutions and ready-to-use templates. Dennis and Antonia will present how the technology can be used to automate advocacy and marketing processes with Erlassjahr.de, an NPO fighting for debt release for countries in the Global South.

Speakers: Dennis and Antonia (CorrelAid e.V.), Moderator: Nina (CorrelAid e.V.)

### SESSION #3: INTEREST IN THE GOOD LIFE FOR THE ELDERLY IN RURAL AREAS

CorrelAid assisted Denk-Mal-Kultur e.V. in finding out who is interested in the good life for the elderly in rural areas by setting up an online survey and writing up a short report with key findings.

Speakers: Theresa and Sylvi (CorrelAid e.V.), Moderator: Isabel (CorrelAid e.V.)



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6:30PM–7:00PM · Stage · Input (20min), Q&A (10min)

## DATA DIALOGUES - AN INTERVIEW WITH THE BERLIN CHAPTER

Defining a Data4Good project scope is not easy. Liam Bailey presents the open data dialogue that can help social organizations to define their data challenges and crowdsources possible data strategies with a pool of data scientists.

Interview partners: Liam (CorrelAid e.V.), Nina (CorrelAid e.V.)

7:00PM–8:00PM · Stage · Input (60min)

## SOLVING CODING CHALLENGES FOR GOOD

What our community can do became obvious in our 2020 coding challenge - join us to revisit the great submissions of our community members and get inspired by what data can do. Isabel Willmann, our Head of Community Management, will walk you through the different examples of using Data4Good.

Speakers: Isabel, Konrad, Steffen, Sarah, Drenizë, Pia, Jie, Benjamin, Aylin and Long (CorrelAid e.V.)

8:00PM–10:00PM · Stage · Fun (120min)

## OPEN BAR

Join us for a fun Friday night to connect and share. We will provide the games but it is BYOB (Bring your own beverage).

Game planners: Isabel and Daniel (CorrelAid e.V.)



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10:00AM–10:30AM · Stage · Input (30min)

## CORRELAID 2020 - REVISITING A TURBULENT YEAR

Frie Preu, Head of Operations, will walk you through our journey through our 2020 milestones, achievements and challenges.

Speaker: Frie (CorrelAid e.V.)

10:30AM–12:00PM · Stage · Input (60min), Discussion & Q&A (30min)

## DATA ETHICS: GATHERING DATA ON ETHNICITY, GENDER AND SEXUALITY

Resolving societal challenges, ensuring equity and similar opportunities for all members of society, requires sensitive data collection. How can we collect data on ethnicity, gender and sexuality in a sensitive manner? Two experts will lead us in how to fulfil our mission in data ethically.

Speakers: Joshua Kwesi Aikins (Citizens for Europe), Flip (Bundesverband Trans\*), Moderator: Frie (CorrelAid e.V.)

12:00PM–1:30PM · Stage and Networking Area · Food (90min)

## LUNCH BREAK

Nina will take you along to cook a vegetarian meal with her and talk a bit about her second passion: Food waste in Germany. Join if you also want to share and network.

Cook: Nina (CorrelAid e.V.)

1:30PM–2:30PM · Sessions · Input (30min), Discussion & Q&A (30min)

## TOPIC SESSIONS

### #1 DATA4GOOD: HOW DO WE LEVERAGE DATA TO SERVE THE COMMON GOOD?

Data in the social sector is often still synonymous with impact measurement. In this topic session, we will discuss how to make the social sector and policies more efficient and effective using data by both enabling data-driven decision-making and completely rethinking processes by using data and tech. We will also talk about dangers and pitfalls of using data.

Speakers: Johannes (CorrelAid e.V.), Amber (Tactical Tech), Igor (Phineo), Moderator: Nina (CorrelAid e.V.)

### #2 EDUCATION: WHAT MAKES A GOOD DATA SCIENTIST?

The field of data science is broad: Job descriptions refer to data analysts, data scientists and data engineers and the list of technologies is growing fast. For young professionals, it is difficult to navigate the field. In this topic session, we aim to answer questions related to building a career in data science: 'Which career paths are open to young professionals and how do they differ? Which key characteristics does a professional working in data possess? Which programming languages should prospective applicants focus on? Which technologies are in high demand? What are the go-to sources to stay ahead of current developments in tech?' Get insights to answer your own questions in the 30min moderated discussion starting from 2PM.'

Speakers: Joseph (DataQuest), Oleg (NextRoundCC), Moderator: Isabel (CorrelAid e.V.)

### #3 CAREERS: REAL CAREERS IN DATA SCIENCE

Sometimes finding a career is done by speaking to the people who already built it: Listen to members of our community present the variety of careers that can be found in data and listen to how they decided and succeeded on their respective paths. Some but not all examples include: Data journalism, research, tech companies...

Speakers: Yannik, Sylvi, Damon (CorrelAid e.V.), Moderator: Manuel (CorrelAid e.V.)



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2:30PM–4:00PM · Sessions · Workshop (90min)

## BEGINNER SESSIONS

### INTRODUCTION TO R

The R workshop gives an introduction to base R covering functions to handle and visualize different variable types (bar and pie plots, scatterplots, histograms). In the second part, we look at more advanced plots (different visualization for different groups of respondents) and briefly cover the estimation and visualization of linear regression models. It would be nice if everyone had R and RStudio installed (both are freely available under <http://www.cran.r-project.org/> and <http://rstudio.org/download/desktop>).

Speaker: Mirka (Postdoctoral Researcher at the University of Zurich)

### INTRODUCTION TO PYTHON

In this workshop, Henry will give an introduction to Python and its ecosystem for data science. In this session he tries to present key features of python and hint to further resources. It won't be an extensive introduction into the syntax and data structures, but a broad overview which should give you an impression of 'python' - so that you are able to decide if you want to go further.

Speaker: Henry (PhD fellow in the Copenhagen Bioscience PhD Program)

### INTRODUCTION TO RSHINY

Shiny apps offer sophisticated tools to generate web applications for a variety of needs such as visualizing (research) results or making data sets easily accessible. The workshop will guide you through the necessary steps to set up your own ShinyApp and discuss lessons learned from building a ShinyApp using Shiny for R, shinydashboards, and echarts4r.

Speaker: Cosima (Researcher at the University of Mannheim)



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2:30PM–4:00PM · Sessions · Talks (30min each)

## ADVANCED SESSIONS

### DATA VISUALIZATION

Moderator: Konstantin (CorrelAid e.V.)

- 2:30 PM: Building a modularized Shiny app with {golem} and html widgets

In this talk, Cédric introduces you to modularized Shiny apps and a library called {golem} that simplifies the process. He will also give an overview of html widgets that are useful for designing your app and allow for interactive charts and an overall nice user experience. He is going to demonstrate the possibilities using our Shiny app from the LC Berlin that recently won the CorrelAidX challenge.

Speaker: Cédric (Computational Ecologist and Data Visualization Designer)

- 3:00 PM: Reproducible Data Availability Visualization with Github Pages

An unfamiliar dataset or a 500-piece puzzle have (at least) one thing in common: in the beginning it is hard to find the things you are looking for. While codebooks with metadata usually provide a first overview on available sample sizes, they also tend to be dry and boring matters. Let's make metadata easier on the eye. In her talk, Lisa will show you how she used RMarkdown and GithubPages to visualize the data availability for some of the Socio-Economic Panel data. The website is reproducible and helped her collaborators who were not familiar with the data to get started with the research design quickly, because it was easy to find out which variables would be suitable for analysis to begin with.

Speaker: Lisa Reiber (Empirical Social Scientist at Citizens for Europe)

- 3:30 PM: Visual narratives to connect: data visualization for and with people

As information designer, I constantly explore the possibilities that designing a piece opens in terms of creation of a connection with the people. A constant visual experimentation has a significant role in such research. During the talk I'll show the process behind a set of data visualizations with a common ground of interest for the relationship between designer and people: not only as readers, but also as narrators. I'll share the design phases and the lessons learnt throughout the processes.

Speaker: Federica Fragapane (Visual and Information Designer)



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2:30PM–4:00PM · Sessions · Input (30min each)

## ADVANCED SESSIONS

### DATA ENGINEERING

Moderator: Frie (CorrelAid e.V.)

#### - 2:30 PM: Data Engineering in Google Spreadsheets with Google Script

Spreadsheets are an entry drug to data but can become messy real quick - especially when at scale. For robust data outputs we need clean and structured data. But how to get there without a 500\$ Tableau team subscription? JavaScript (and Metabase) to the rescue! Ilja will walk us through his journey of low-Budget data engineering with Google Apps Script, R, and the Google Spreadsheet API.

Speaker: Ilja Sperling (Freelancer / Ranking Digital Rights)

#### - 3:00 PM: Building Individual Data Products for Social Good with Python, PostgreSQL and Vue.js

Jan from cause&effect will share how they use open source technologies to build individual data products. His motto: Don't be MEAN, use PPV.

Speaker: Jan Dix (cause&effect)

#### - 3:30 PM: AutoML in the wild

Gesa will share insights into her job at Gpredictive where she uses technologies like Spark and Scala to build automated data pipelines.

Speaker: Gesa Müller (Gpredictive)

### MODELLING

Moderator: Yannik (CorrelAid e.V.)

#### - 2:30 PM: DISH-O-TRON: A fun experiment to build your own AI product

Solving real-world problems with AI often times starts with the realization that there is no data available. In this talk we will show how we tackled the problem of 'mysteriously appearing dirty dishes in the community kitchen sink' by building an AI-system from scratch. You can read more about the DISH-O-TRON [here](#).

Speakers: Marcel Mikl & Oli Moser (codecentric)

#### - 3:00 PM: Using machine learning to detect anomalies in beehives

Speakers: Alexander Goncharskiy (CorrelAid e.V.), Diren Senger (University of Bremen)

#### - 3:30 PM: The political discourse on discrimination: analysing 70 years of the Bundestag

As the German constitution states, the sittings of the Bundestag need to be public which is why the plenary protocols are openly accessible. These massive amounts of text which have accumulated over 70 years are not manageable anymore without machine assistance. Taking the example of discrimination, we are going to look into which insights we can derive using several techniques from Natural Language Processing.

Speaker: Alexandra Wörner (scieneers)



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2:30PM–4:00PM · Sessions · Talks (30min each)

## ADVANCED SESSIONS

### GEOSPATIAL DATA

Moderator: Daniel (CorrelAid e.V.)

#### - 2:30 PM: Introduction to Geodata in R

Michael will give an introduction into fundamentals of spatial data and introduction into basic R packages for spatial data

Speaker: Michael Matiu (Eurac Research)

#### - 3:00 PM: #30daymapchallenge: (a little less than) 30 different ways to create interactive maps with R

Alex will share an exclusive preview of her results for the #30daymapchallenge. Each day is dedicated to an idea or a package about maps: Using Deck.gl in R, viz of most used pathways, getting OSM data straight into R with a single line of code, creating 3D maps, draggable polygons in leaflet, origin destination flows, voronoi maps, etc

Speaker: Alexandra Kapp (Mobility Institute Berlin).

#### - 3:30 PM: Introduction to PostGIS: PostgreSQL going spatial

Spatial data is often encountered in the form of flat files, such as shapefiles. However, the integration of such data into relational databases may offer several advantages in complex scenarios. In this talk, Malte will provide a brief introduction and overview to PostGis, a spatial extension for PostgreSQL.

Speaker: Malte Kyhos (civey)

4:00PM–4:30PM · Stage and Networking Area · Connect (30min)

## NETWORKING COFFEE-BREAK

Connect and socialize with data scientists and like-minded people through our remote coffee break.

Organizer: Isabel (CorrelAid e.V.)

4:30PM–5:30PM · Stage · Input (60min)

## CORRELAIDX PECHA KUCHA

Meet our local chapters through this engaging presentation format and see where you could find a chapter that might work for you.

Speakers: Florian & Pia (München), Moderator: Isabel (CorrelAid e.V.)

05:30PM - 05:45PM · Stage · Input (15min)

## WRAP-UP AND OUTLOOK FOR SUNDAY

Short wrap-up of the day so far and a preview of what is up in the evening and on Sunday morning where we will dive into the internal structure of CorrelAid and have some strategic discussions.

Speaker: Frie (CorrelAid e.V.)

05:45PM - 8PM · Stage/Session · Exchange (135min)

## OPEN SPACE

Anything else that you want to share? Are you super inspired and would like to discuss your fresh impressions? The stage is yours: feel free create your own session to network and exchange ideas.

Moderator: YOU



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10:00AM–10:15AM · Stage · Input (15min)

## INTERNAL STRUCTURE OF CORRELAID

How does CorrelAid work internally? How can you participate? Find out what we do in this brief session for CorrelAid newbies!

Speaker: Isabel (CorrelAid e.V.)

10:15AM–10:45AM · Sessions · Input (30min)

## CORE TEAM MEETINGS

### #1 PODCAST/BLOG/PR

Ever wondered who produces our great online material and entertaining podcasts? Log in and find out!

Moderator: Jasmin (CorrelAid e.V.)

### #2 CORRELAIDX

Local chapters organize by regions in Germany. Here you can link up to the closest chapter from your home and exchange with other chapters how to do Data4Good best.

Moderator: Isabel (CorrelAid e.V.)

### #3 EDUCATION

Sharing knowledge with NPOs on how to make use of data is at the core of this team. Figure out what a book, workshops and the data hour have in common!

Moderator: Nina (CorrelAid e.V.)

### #4 PROJECT COORDINATION

Behind our Data4Good projects, there is a coordination team that holds all the threads together and has the overview. Frie provides insights into this exciting, but also complex activity.

Moderator: Frie (CorrelAid e.V.)

10:45AM–12:00PM · Stage · Discussion (75min)

## A NEW STRATEGY FOR CORRELAID

We want to hear your thoughts on how to make better use of Data4Good and promote our vision in the world. Join us for a discussion of where we are going next.

Moderator: Johannes (CorrelAid e.V.)

12:00PM–12:10PM · Stage · Input (10min)

## GOODBYE

Speaker: Johannes Müller



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