

# Tim Draws

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timdraws.net — Google Scholar — 

## Professional Experience

**Otto, Hamburg, Germany**, Data Scientist (September 2023 – present)

- Developed and improved machine learning models for supply chain demand forecasting.
- Standardized data and software pipelines to scale forecast development and deployment.

**IBM, Yorktown Heights, NY, USA**, Research Intern (February 2022 – July 2022)

- Implemented 10 NLP models and five explainable AI methods in Python for stance detection in search results
- Compared model performance and evaluated explanations with users to derive recommendations for practitioners

**IBM, Amsterdam, NL**, Research Intern (April 2019 – June 2019)

- Designed and conducted a study ( $N = 489$ ) investigating the effect of algorithmic unfairness on consumer trust
- Analyzed consumer data using classical and Bayesian ANOVAs; distilled insights for personal finance applications

**JASP (University of Amsterdam), Amsterdam, NL**, Research Assistant (January 2017 – March 2019)

- Co-developed the [Machine Learning Module for JASP](#) (an open-source statistical software) by implementing ML methods such as regularized regression and random forest in R and designing the user interface in Qt.

## Education

**Delft University of Technology**, PhD Computer Science, cum laude (August 2019 – July 2023)

- Worked on understanding viewpoint biases in web search results and their effects on user behavior.
- Designed and conducted 10+ user experience studies involving 2500+ users; visualized and analyzed the results in R and Python (e.g., hypothesis tests as well as descriptive, exploratory, and qualitative analyses).
- Developed novel frameworks and instruments to represent viewpoints and measure user behavior and opinions.
- Built 10+ ground truth data sets, implemented ML models, and developed novel metrics to evaluate bias.
- Managed research teams, supervised four BSc/MSc students, and tutored in HCI/UX research methods classes.
- Gave 20+ presentations of research findings to academic and industry audiences and co-organized two events.

**University of Amsterdam**, MSc [Behavioral Data Science](#), cum laude (2018 – 2019)

Data Mining · Big Data Analytics · Machine Learning · Psychometrics · Data Visualization · Network Analysis

**University of Amsterdam**, BSc [Psychological Methods](#), with distinction (2015 – 2018)

Mathematics · (Bayesian) Statistics · Programming · Research Methodology · Psychology · Latent Variable Models

## Skills

**Programming/Software:** R, Python, SQL, Git, Tableau, Microsoft Excel, HTML, CSS

**Data Science:** classical and Bayesian hypothesis testing (e.g., A/B tests), statistics, (un-)supervised machine learning, causal inference, time series, natural language processing, explainability methods, data science pipeline (cleansing, wrangling, visualization, modeling, interpretation), demand forecasting

**Research:** user survey and experiment design, psychometrics, qualitative analysis

## Projects

[Statistical Test Finder](#) – created a flowchart for finding the right statistical hypothesis test.

[Data Versus Corona](#) – contributed to a large, interdisciplinary effort against COVID-19 by implementing several ML models to predict infection prevention behaviors and identifying important predictors.

[HNO Ratgeber](#) – co-created a YouTube channel for reliable medical advice (60+ videos and 4.5M+ views).

## Awards

Received **four Best Paper Awards** in recognition of exceptional research contributions at competitive, high-ranking academic conferences ([HCOMP '21](#), [Hypertext '21](#), [CHIIR '22](#), [CHI '23](#)).

## Languages and Interests

German (native), English (C2), Dutch (C2) – Basketball, vinyl records, cooking, my dog Sepp