

# Mehmet Kutluay

SENIOR DATA SCIENTIST

Amsterdam/Rotterdam - The Netherlands

+31 685478120 | [mehkutluay@gmail.com](mailto:mehkutluay@gmail.com) | [YMehmetKutluay](https://www.linkedin.com/company/YMehmetKutluay) | [mehmet-kutluay-phd](https://github.com/mehmet-kutluay-phd)

## Skills

### DATA SCIENCE

- Network Analytics, Anomaly Detection, Docker, Spark, Time Series Forecasting, Cross-Sectional Prediction, Data Visualization, Data Wrangling, Dashboarding

### LANGUAGES

- Statistics/Data Science: Python, R, Matlab
- Other: Markdown, Latex, Microsoft Office

## Experience

### Transactie Monitoring Nederland

May 2021 - Present

SENIOR DATA SCIENTIST

Purmerend

- Part of the Analytics team, consisting of data scientists and anti-money laundering experts
- Working on two Python packages for network analytics projects: 1. efficient network traversals and 2. detecting communities within networks
- Main linking pin between the engineering teams and Analytics to ensure a workable framework for model development
- Mentoring other data scientists and finding ways to enable anti-money laundering experts to be integrated into analytics projects
- Participating in high-level discussions on day-to-day and strategic topics regarding the Analytics team

### ING Bank N.V. - Financial Crime Analytics

Nov 2019 - May 2021

DATA SCIENTIST

Amsterdam

- Part of a big team of 20-25 FTE's that develop models to detect money laundering and other illegal financial activities
- Creating two Python packages for: 1. streamlined unsupervised anomaly detection and 2. extracting network features from transaction data
- Main machine learning domain: unsupervised anomaly detection (e.g. isolation forest, k-means, outlier variational autoencoder)
- Communicating with other end-users of the Python packages for further development
- Running workshops on day-to-day usage of Docker
- Coaching trainees in data science work

### ING Bank N.V. - Finance Analytics

Feb 2018 - Nov 2019

DATA SCIENTIST

Amsterdam

- Part of a small team of 2-3 FTE's that service employees in Group Finance through analytics projects. All projects are centered around time series data cleaning, wrangling and forecasting
- Created three R packages for time series forecasting, detecting/correcting anomalies and data exploration
- These R packages are open sourced and maintained by me. Click for [tstools](#), [tsclean](#), [tsforecast](#)
- Main machine learning domain: time series forecasting (ARIMA, LSTM, Kalman filter)
- Deploying projects via local and docker solutions
- Running workshops and trainings in R, Python and statistics
- Coaching IT trainees in data science work
- Engaging stakeholders to help them become more data-savvy and understand what they can (and can't) do with data science

### VU University Amsterdam

Sep 2014 - Aug 2018

PHD RESEARCHER IN ENVIRONMENTAL ECONOMICS

Amsterdam

- Thesis title: 'The Value of (Avoiding) Malaria' ([link](#), graduated 2nd of May 2019)
- Supervisors: Roy Brouwer & Richard Tol
- Links to completed papers:
  - Valuing malaria morbidity ([link](#))
  - Preference updating in public health risk valuation ([link](#))
  - Public preferences and valuation of new malaria risk ([link](#))
  - Attitudes towards public health spending ([link](#))
- This was financed by an EU FP7 project: HELIX ([link](#)). This involved multidisciplinary collaboration with researchers from mathematics, physics, engineering, geography and sociology. I organized and executed a field survey in Mumbai, India between March - June 2016 as part of this project. Some analyses of the data from this survey can be found on my [GitHub](#) page.

### VU University Amsterdam / Tinbergen Institute

Sep 2013 - Feb 2018

TEACHING ASSISTANT

Amsterdam

- Courses: Statistics/Econometrics (masters level - including coding in SPSS and R), Mathematics (masters level - linear algebra and advanced calculus)

# Education

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## **Amsterdam/Rotterdam, The Netherlands**

*Sep 2012 - Aug 2014*

MPHIL IN ECONOMICS

*Tinbergen Institute*

- Specialization: Applied micro-econometrics
- Thesis: 'What explains willingness to pay for avoiding morbidity risk due to malaria? Results from a global meta-analysis' (later on became first chapter of PhD thesis)

## **Ankara, Turkey**

*Sep 2008 - Jun 2012*

BSc IN ECONOMICS

*Bilkent University*

- Specialization: Academic (i.e. a special focus on applied mathematics and statistics)