

# Csaba Kiss

PHD STUDENT · APPLIED MATHEMATICS

HSDSLab, Budapest University of Technology, Budapest, Hungary

✉ kisscs@math.bme.hu | ⓡ [github.com/csabi0312](https://github.com/csabi0312) | ⓢ [csaba-kiss0312](https://www.csabi0312.com)

## Professional Experience

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2025-  
present **Deputy Head of Operations**, HSDSLab, Budapest University of Tech. and Eco.

2022-2024 **Graduate Research Assistant**, HSDSLab, Department of Stochastics, Budapest University of Tech. and Eco.  
*Leader: Dr. Roland Molontay*  
*Research topics: Applications of Machine Learning (Log-anomaly detection, Dynamical Clustering, Network Analysis, Knowledge Graph Analysis)*

2023-2024 **Graduate Teaching Assistant**, Budapest University of Tech. and Eco.

2021-2022 **Undergraduate Teaching Assistant**, Budapest University of Tech. and Eco.

## Education

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### **Budapest University of Technology and Economics, Department of Stochastics, HSDSLab**

Budapest, Hungary

PHD IN MATHEMATICS

2024 - present

- Topic: Integration of Network Science, NLP, and Deep Learning for Advancements in Telecommunications, Healthcare, and the Energy Sector
- Supervisor: Dr. Roland Molontay

### **Budapest University of Technology and Economics**

Budapest, Hungary

MSC IN APPLIED MATHEMATICS, SPECIALIZING IN FINANCIAL MATHEMATICS

2022 - 2024

- Master's thesis: Limiting distributions of interacting particle systems
- Supervisor: Dr. Béla Véto
- One semester at TU Graz (Austria) with Erasmus+ scholarship, Spring 2023
- Qualification of diploma: excellent with highest honors (DGPA= 4.93/5)

### **Budapest University of Technology and Economics**

Budapest, Hungary

BSC IN APPLIED MATHEMATICS, SPECIALIZING IN STOCHASTICS

2019 - 2022

- Bachelor's thesis: Modelling the age of the oldest person in the world
- Supervisor: Dr. Béla Véto
- Qualification of diploma: excellent with highest honors (DGPA= 4.98/5)

## Teaching Experience

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Fall 2024	<b>Stochastic Models (in English) for Appl. Math. MSc students</b> , Instructor of the laboratory exercises	Department of Stochastics
Fall 2023	<b>Mathematics A3 for Civil Engineers (Differential equations, Probability Theory)</b> , Instructor of the practical course	Department of Stochastics
Spring 2022, 2024, 2025	<b>Mathematics A2 for Engineers (Multivariate Calculus)</b> , Instructor of the practical course	Department of Analysis
Fall 2021	<b>Mathematics A1 for Electrical Engineers (Univariate Calculus, Vector Geometry)</b> , Instructor of the practical course	Department of Analysis

## Mentoring

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Fall, 2025	<b>Noah Roussel</b> , Erasmus Master Intern, Topic: A Scientometric Analysis of the Pharmacology Journal Landscape	HSDSLab, Budapest University of Tech. and Eco.
Summer, 2025	<b>Gabriel Vignon</b> , Erasmus Master Intern, Topic: A Scientometric Analysis of the Pharmacology Journal Landscape	
Spring, 2025	<b>Alexy Bounsvath</b> , Erasmus Master Intern, Topic: Analysis and classification of Cryptocurrency Tokens	
Fall, 2024	<b>Imren Ece Titiz</b> , Erasmus Master Intern, Topic: Diet-related trend analysis across media platforms	
Spring, 2024	<b>Gwen Billy</b> , Erasmus MSc Intern, Topic: Diet-related trend analysis across media platforms	

## Publications

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### PUBLISHED

Biró, B., **Kiss, Cs.**, Molontay, R., Aszódi, A. (2026). *Industry-adaptable explainable AI based methodology for forecasting electricity prices*. *Energy Conversion and Management*: X, **2026**, 101583. ISSN 2590-1745. <https://doi.org/10.1016/j.ecmx.2026.101583>

**Kiss, Cs.**, Nagy, M., Szilágyi, P. (2025). *Max-Min semantic chunking of documents for RAG application*. *Discover Computing*, **28**(1), 117. <https://doi.org/10.1007/s10791-025-09638-7>

**Kiss, Cs.**, Németh, L., Véto, B. (2024). *Modelling the age distribution of longevity leaders*. *Scientific Reports*, **14**(1), 20592. <https://doi.org/10.1038/s41598-024-71444-w>

### SUBMITTED

**Kiss, Cs.**, Titiz, I., Billy, G., Molontay, R. *Cross-Platform Analysis of Diet Discourse: Scientific Research, News Media, and Social Media Compared Environmental Communication*

### IN PREP.

**Kiss, Cs.**, Pergola, G., Molontay, R. *Advancing Causal Inference in Adverse Drug Effect Detection with NLP and Machine Learning*

## Conferences, & Visits

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\*presenting author

Bounsvath, A., **Kiss, Cs.** \*, Savci, T., Hellner, G., Molontay, R. *Anticipating Crypto Success: An XAI Framework for Early-Stage Token Viability Using Deployment Features*. *IEEE International Conference on Distributed Ledger Technologies 2025*, Pune, India (online)

**Kiss, Cs.** \*, Pergola, G., Molontay, R. *Advancing Causal Inference in Adverse Drug Effect Detection with NLP and Machine Learning*. Biomedical Data Science Summer School and Conference, Aug. 2025, Semmelweis University, Budapest, Hungary.

**Kiss, Cs.** \*, Pergola, G., Molontay, R. *Advancing Causal Inference in Adverse Drug Effect Detection with NLP and Machine Learning*. Invited Seminar and Research Visit, May 2025, University of Warwick, Coventry, UK.

**Kiss, Cs.** \*, Németh, L., Véto, B. *Modelling the distribution of longevity leaders*. 15th International Seminar on Supercentenarians, Autumn 2023, Paris, France.

## Awards, & Grants

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2024 **Kató Rényi Memorial Award**, János Bolyai Mathematical Society

2024-2028 **Cooperative Doctoral Programme (EKÖP-KDP)**, Ministry of Culture and Innovation, Hungary

2024 **Outstanding Student of the Faculty Award**, BME Faculty of Natural Sciences

2023 **1st prize at ELTE, conference of Student Research Societies (TDK)**,  
Title: On the asymptotic behavior of geometric q-push TASEP with particle creation model,  
Supervisor: Dr. Bálint Vető

2023-2024 **New National Excellence Program (ÚNKP)**, Ministry of Culture and Innovation, Hungary

2023 **2nd prize at the national conference of Student Research Societies (OTDK)**,  
Title: Modelling the age of the oldest person in the world, Supervisor: Dr. Bálint Vető

2023 **Bronze Medal at the NSUCRYPTO international competition (second round)**,  
Team members: Csaba Kiss, Donát Kóller, Márton Marits

2022 **2nd prize at BME, conference of Student Research Societies (TDK)**,  
Title: Modelling the age of the oldest person in the world, Supervisor: Dr. Bálint Vető

2022 **Outstanding Student of the Faculty Award**, BME Faculty of Natural Sciences

2022 **Bronze Medal at the NSUCRYPTO international competition (second round)**,  
Team members: Csaba Kiss, Donát Kóller, Márton Marits

2021 **3rd prize at BME, conference of Student Research Societies (TDK)**,  
Title: Synthetic characterization of isometries in the hyperbolic space, Supervisor: Dr. Ákos G. Horváth

## Related skills

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### LANGUAGES

**Hungarian**, native proficiency  
**English**, full working proficiency  
**German**, limited working proficiency

### PROGRAMMING LANGUAGES

**Python**, (scikit-learn, pandas, seaborn, matplotlib, numpy, tensorflow, pytorch, networkx)  
**Wolfram Language**, (Mathematica)  
**R**, .