



Energy & Sustainability

Biophysical Economics & Net Energy Analysis
Sustainable Energy Transitions

Simulation Modeling

Agent-based modeling & Complex systems
Systems Thinking & System Dynamics


Data Science

Machine Learning & Data Mining
Data Visualization & Infographics


Dénes is an **assistant professor** in *Energy Storage Systems Dynamics* with *Energy Lancaster*, a **visiting assistant professor** in *Machine Learning and Data Visualization* with *Babes-Bolyai Business School* and an **independent consultant** in *data science, energy and data visualization*. His research interests include **data visualization**, energy transitions, **system dynamics**, data mining, machine learning, **AI** and agent-based modeling.

He is a well-known researcher in the field of **sustainable energy transitions** and **biophysical economics**. With a *PhD in Interdisciplinary Engineering* from *Masdar Institute*, in collaboration with *MIT*, his research has been published in *Nature* and it has been featured in *The Times*. He currently leads an **energy data analytics** project at Lancaster University.

When not in front of the computer, Dénes roams the **mountains** of the **Himalaya** and the **jungles** of **Africa** to hold workshops on **sustainability** and **renewable energy**. His **dataactivism** blog *Try something new. Everyday.* Is followed by 3000, exploring topics in development through **story-telling with data**.

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Babes-Bolyai University
Faculty of Economics and Business Administration
Data Visualization Lead for COVID-19 Monitor

2009 BSc in Electrical Engineering Technical University of Cluj-Napoca, Romania

2010 Teaching Assistant Technical University of Cluj-Napoca, Romania

2011 ERASMUS Scholarship Student TEI of Western Macedonia Kozani, Greece

2012 Research & Teaching Assistant Masdar Institute Abu Dhabi, UAE

2013 International Summer University on Energy Helmholtz Zentrum Berlin Falera, Switzerland

2014 Co-founder ARC initiative Abu Dhabi, UAE

2015 PhD exchange Sloan School, MIT Cambridge, MA, US

2016 PhD in Interdisciplinary Engineering Masdar Institute & MIT Abu Dhabi, UAE

2017 Research Assistant Pardee Centre Boston University Boston, MA, US

2018 Professional Certificate in Blockchain Strategy Saïid Business School University of Oxford, UK

2019 Professional Certificate in Deep Learning deeplearning.ai

2020 Assistant Professor Babes-Bolyai University Cluj-Napoca, Romania

2021 Assistant Professor Babes-Bolyai University Cluj-Napoca, Romania

2021 COO & Co-founder DESCO Analytics Lancaster, UK

2021 Jury member Zayed Sustainability Prize Global High Schools Abu Dhabi, UAE

2021 Consultant

Professional 4y years Asst Prof, 7y Research Ast, 4y Teaching Ast, 5y Development, 5y Data Science

Personal 4 DAN black belt in Shotokan Karate, 4 DAN in Kendo, 2 World & 4 Euro Championships, Climbed Mont Blanc Stok Kangri 6153m, Visited 70 countries, Lived in 6 on 3 continents

Research 20+ peer-reviewed articles in journals including Nature, RG: 15.8 h-index: 6, PI on 5 research grants, Co-I on 3, Research featured in Times, WEF, with over 200,000 reads

Projects Educational workshops on sustainability and renewable energy in Kenya, Rwanda, Malaysia, Indonesia, Tanzania, India, Somaliland, 3000 blog followers, Live workshops on dataviz, dataactivism

Visualizations My data analyses have been featured by UNDP, UNHCR, the GDELT project and Kantar Info Beautiful Awards, Pro in D3, D3plus, Seaborn, Bokeh, PowerBI, Grafana, HTML + CSS + JS

Models My agent-based & system dynamics simulation models top 3 of the 10 categories on runthemodel.com Ecosystem& Social Dynamics AnyLogic, Pro in Python, keras, TF, sk-learn

Presentations Languages: As native: EN, HU, RO; Medium: FR, DE; 30+ presentations around the world, Pro in slides.com presentations

Consultant Data visualization consultant for the Romanian and Hungarian governments, Dataviz lead for the COVID-19 Romanian Econ. Impact Monitor, the most visited COVID information site in the country.

studied in 3 countries worked in 6 countries

