

# DR. AGOSTON TOROK

## Lead Data Scientist

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## EXPERIENCE

### Lead data scientist

#### AGT Group R&D GmbH

Jan 2018 – ongoing   Darmstadt, DE

- Driving the development of analytics from conception to product.
- Mentoring and motivating data professionals; serving as scrum master or product owner, taking part in hiring talents.
- Explaining analytics on business and sales meetings on four continents.

### Data scientist and R&D Lead

#### Synetiq Ltd.

Aug 2015 – Jan 2018   Budapest, HU

- Took part in the development of a large scale analysis pipeline that handles 200 new testers' physiological data every month for ad optimization.
- Functioned as the R&D Lead and was responsible for the growth of the company "know-how".

### Research fellow

#### Institute for Computer Science and Control, Hungarian Academy of Sciences

Jan 2017 – Dec 2017   Budapest, HU

- Developed a research program to study the cognitive aspects of autonomous cars (GLMM, Clustering) for safer interfaces.
- Taught Multivariate statistics, Research methodology, and supervised thesiswork at ELTE.

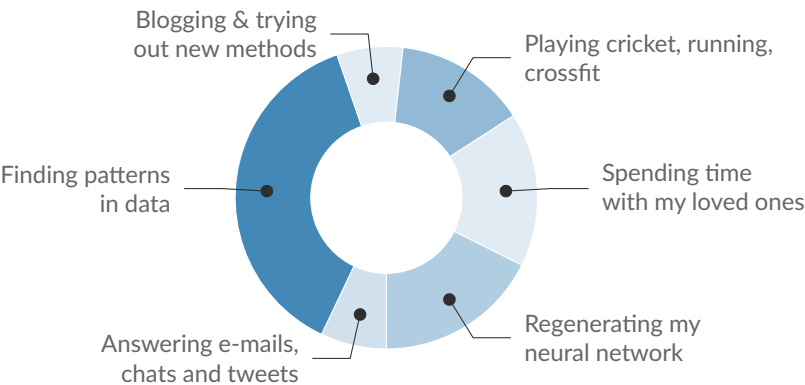
### Research associate

#### Brain Imaging Centre, RCNS, Hungarian Academy of Sciences

Apr 2009 – Dec 2016   Budapest, HU

- Won 4 research grants, 5 travel grants and took part in several research projects in Europe and overseas.

## A DAY OF MY LIFE



## LIFE PHILOSOPHY

*"Everything is theoretically impossible, until it is done."*

## MOST PROUD OF



### Leading a team

I've been leading teams of up to 10 people with a wide variety of expertise



### Keynote speaker

I gave a talk about AI at the Annual Meeting of the John von Neumann Society



### Interdisciplinary link

I successfully worked together with businessmen, engineers, geographers, linguists, and mathematicians

## STRENGTHS

Hard-working (17/24)   Creative

Customer-focused

Bayesian

ML

Inverse RL

Statistics

Probabilistic inference

Streams

AWS

Python

R

Matlab

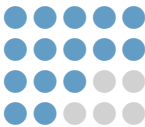
SQL

MongoDB

TDD

## LANGUAGES

Hungarian  
English  
Italian  
German



## EDUCATION

### PhD in Cognitive Neuroscience

#### Eötvös Loránd University

Sep 2011 – Jun 2017

Thesis: Spatial perception and cognition, insights from experiments in virtual reality

### M.A. in Cognitive Psychology

#### Eötvös Loránd University

Sep 2006 – Jun 2011

## SELECTED PROJECTS



### Productive Data Science Teams Blog

I'm writing stories about agile data science teamwork/product development on Medium/Towards Data Science



### Slides of Loci

I designed my on 2D/3D presentation toolkit in Unity3D in C#



### Ad Targeting

With two friends of mine, developed an AI solution to fine-tune ad targeting based on facial similarity



### Clean git practices hook

I wrote a fun tool in bash to check commit messages and give feedback in Linus Torvalds style

## AWARDS & SCHOLARSHIPS

- 2017 - Best Session Award at IEEE CIC 2017
- 2017 - 1st place at the Telekom Leading Data Hackathon
- 2016 - Qusp prize at the IEEE Brain & Vision Hackathon
- 2016 - 28th place on the Senior Data Science competition
- 2013 - Junior researcher fellowship, Hungarian Academy of Sciences
- 2013 - Campus Hungary Scholarship
- 2011 - Scholarship by the Student Union of Benedictine Schools
- 2010 - Scholarship granted by the Republic

## PRO BONO CONTRIBUTIONS

- Review editor, Virtual Environments, Frontiers in Robotics and AI
- Member of the International Program Committee of CogInfoCom
- Msc Thesis supervision at Hochschule Darmstadt & ELTE Budapest

## SELECTED PUBLICATIONS

- Torok, Agoston et al. (2019). "A novel virtual plus-maze for studying electrophysiological correlates of spatial reorientation". In: *Neuroscience letters*.
- Nadasdy, Zoltan et al. (2017). "Context-dependent spatially periodic activity in the human entorhinal cortex". In: *Proceedings of the National Academy of Sciences*. DOI: 10.1073/pnas.1701352114.
- Török, Ágoston, Elisa Raffaella Ferrè, et al. (2017). "Up, Down, Near, Far: An Online Vestibular Contribution to Distance Judgement". In: *PLOS ONE* 1. DOI: 10.1371/journal.pone.0169990.
- Török, Ágoston, Andrea Kóbor, et al. (2017). "Temporal dynamics of object location processing in allocentric reference frame". In: *Psychophysiology*.
- Honbolygó, Ferenc et al. (2016). "ERP correlates of prosody and syntax interaction in case of embedded sentences". In: *Journal of Neurolinguistics*.
- Török, Ágoston, T Peter Nguyen, et al. (2014). "Reference frames in virtual spatial navigation are viewpoint dependent". In: *Frontiers in human neuroscience*.

## RESEARCH

The significance of spatial reference frames in cognitive visualization

[ELTE Multidisciplinary Grant](#)

📅 Jul '16 - ongoing 📍 Budapest, HU

Using eyetracking and virtual reality to find new ways for cartographic visualization

Twisted Gravity: Assessing visuo-vestibular cues integration for the perception of gravity

[EPS, UK](#)

📅 Jan '17 - Jan '19 📍 RHUL, London, UK

We study gravity perception using Oculus Rift and galvanic vestibular stimulation

Orientation in VR

[KTIA-AIK-12-1-2013-0037](#)

📅 Jun '13 - May '15 📍 Budapest, HU

Creating a new virtual research platform where researchers can work together

- Took part in the development of a custom xml interface for Virca
- Studied EEG recording during locomotion

The gender dimension in Conceptual Modeling

[EU Fp7 - 262044](#)

📅 Sep '14 - Jan '15 📍 Technion, Haifa, Israel

Researching gender dimensions in navigation

- Built a conceptual model in OPM for the neural background of navigation

Visuovestibular distance illusions

[EU Fp7 - 262044](#)

📅 Sep '14 - Dec '14 📍 UCL, London, UK

Studied distance perception on the vertical axis in virtual reality

- Found the explanation for the vertical distance illusion

Audiovisual in-car warning systems

[EU Fp7 - 262044](#)

📅 May '14 - Sept '14 📍 Aix-Marseille Univ., FR

Studied how in-car warning systems interact with attention

- Designed a virtual reality paradigm in Unity3D