Laszlo Treszkai

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EDUCATION

MSc: Artificial Intelligence 2017 – 2018
University of Edinburgh, United Kingdom with distinction (83%)
Courses about ML, deep learning, decision making, probabilistic modelling and natural language processing.
Master's thesis: *Likelihood-based Planning with Loops*, supervised by Vaishak Belle.

Self-taught mathematics 2016 – 2017
Linear algebra, theory of computation, mathematical logic (courses at Eötvös Loránd University, Budapest), *et al.*

BSc and **MSc**: Electrical Engineering (Embedded Information Systems) 2007 – 2013
Budapest University of Technology, Hungary (MSc GPA: 4.4 of 5.0)

PROFESSIONAL EXPERIENCE

Sclable Business Solutions GmbH. *AI Research Engineer* Nov 2018 – Mar 2019
- Document analysis with OCR: developed a system to combine the results from multiple sources.
- Designed and implemented a Bayesian data modelling solution for a recommendation system.
- Used *Python*, *Docker*, *Tornado*, *PostgreSQL*, *SQLAlchemy*, *Pandas*, *NumPy*, *unittest*, *OpenCV*.

TTControl GmbH. *Embedded Software Engineer* Apr 2014 – Mar 2016
The flagship HY-TTC 500 product – an IEC 61508 SIL 2 certified ECU.
- Developed software features in *C language* and *assembly*.
- Created testing tools and test cases in *Python*.
- Coordinated the *software testing*, led successful certification discussions with the TÜV.

Formula Student East, **Formula Student Hungary**. *Electrical Safety Leader* Dec 2014 – Aug 2016
Organised the electrical aspects of the event, managed the work of 8 people before and during the event.

Robert Bosch Kft. *Test Software Developer Intern* Aug 2010 – Dec 2010
Developed an automotive diagnostics software in *Python*, resulting in a fivefold decrease in test time.

PUBLICATIONS

Synthesizing Provably Correct Finite-State Controllers in Stochastic Environments 2019
First author of a paper on automated planning based on my dissertation.

treszkai.github.io 2018
Explanatory and exploratory blog posts about mathematics, AI, and ML.
Multilinear algebra tutorial solutions, *Proofs in mathematical logic*, *The wise men puzzle*

Kristálytiszta elektronika ("Crystal Clear Electronics") 2018
Chapter 16: The timer module
Co-author of a *book* aimed at high school students on embedded hardware and software design.

STUDENT PROJECT

Estimating the uncertainty of deep neural networks Jan – May 2018
- How well do modern deep neural networks estimate uncertainty?
- Experiment with different methods to improve calibration, such as deep ensembles or test-time dropout.

BME Formula Racing Team 2011 – 2013
Group Leader of Low Voltage Electronics (FREC-003 race car), Hardware+Firmware Engineer (FRC-005)
- *Designed* the low voltage *system of 9 ECUs* in a Formula Student car.
- *Lead a group of 7 students* (mechanical, hardware and firmware engineers).
- Designed and built the team's first 3D *CAD model-based wiring harness*.
- Engineering Design 1st place, Energy Efficiency 1st place at the international FSH 2013.