

# Laszlo Treszkai

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## EDUCATION

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**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](#), IJAR publication pending.

**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

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**Scable Business Solutions GmbH.** *AI Research Engineer* Nov 2018 – Mar 2019

- Document analysis with OCR: developed a system to combine 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

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

**[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](#)

**Kristálytisztá 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 PROJECTS

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**Estimating the uncertainty of deep neural networks** Jan – May 2018

- 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](#) and [30 sensors](#) 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 1<sup>st</sup> place, Energy Efficiency 1<sup>st</sup> place at the international FSH 2013.