

# RICHÁRD LENGYEL



## PERSONAL DETAILS

Name: Richárd LENGYEL (23)  
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## ROBOTICS COMPETITIONS

### *AUTONOMOUS TETRIS ROBOT*

Fully autonomous robot with high-level machine vision to sense the environment and classify different objects. Discrete optimisation of Tetris patterns with evolutionary algorithm.

2017 NOVEMBER 2<sup>nd</sup> place at the World Robot Olympiad International Finals in Costa Rica

2017 JUNE 1<sup>st</sup> place Hungarian National Finals as coach of team InnoRobot-X

### *AUTONOMOUS BOWLING ROBOT*

Fully autonomous robot with machine vision applied to trajectory planning and path finding in miniaturized bowling game using LabVIEW.

2016 NOVEMBER Best EU team at the World Robot Olympiad International Finals in India, all-time frame record

2016 APRIL 1<sup>st</sup> place Hungarian National Finals as software architecture designer in TeamForward

## WORK EXPERIENCE

2018 MARCH – RESEARCH INTERN – CZECH INSTITUTE OF INFORMATICS, ROBOTICS, AND CYBERNETICS, CZECH TECHNICAL UNIVERSITY, PRAGUE

2018 JUNE

- Knowledge representation and rudimentary reasoning in uncertain robot world for autonomous cars with Bayesian Logic

2017 SEPTEMBER – THESIS WRITING – GLOVEYE

- Developing OCR with Artificial Neural Networks as my bachelor thesis at GlovEye, a Hungarian Startup, which brings Braille literacy for the blind

2017 DECEMBER

- Implemented in Python using Google Cloud for cloud computing

2017 JULY – ROBOTICS INTERN – BRAINLAB AG, MUNICH

- 10-week internship at leading German med-tech company

2017 SEPTEMBER

- Programming of software capturing the movement speed of each joint of a mechatronic system and statistical analysis of movements during normal usage pattern using Python
- Developing automated trajectory planning software module for spinal surgery in C++

2016 JULY

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2016 DECEMBER

*TALENT PROGRAMME MEMBER – KITCHEN BUDAPEST*

- Six-month scholarship at one of the most famous Hungarian innovation hubs
- Developing our bowling robot for the international finals

2015 JULY

*TRAINEE – S.C. FLASHNET S.R.L., BRASOV, ROMANIA*

- Three-week summer internship – analogue temperature sensor design

2014 JUNE

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2018 AUGUST

*SOFTWARE DEVELOPER – PANNON ÉPÍTŐMŰHELY KFT., BUDAPEST*

- Complete web development and maintenance including front-end (HTML, CSS), back-end (PHP and MySQL) and SEO
- Design of automated electricity consumption logging system to increase building energy efficiency
- Large scale database design and online software development

## **EDUCATION**

2018 - 2020

*JOINT MASTER DEGREE, AUTONOMOUS SYSTEMS & INNOVATION -  
ENTREPRENEURSHIP – EIT DIGITAL ACADEMY*

- 1-1 year TU Berlin & Aalto University, Helsinki

2014 – 2018

*MECHATRONICS ENGINEER – BUDAPEST UNIVERSITY OF TECHNOLOGY*

- Specialised German study group with German-speaking lessons
- Maths: 19 ECTS, programming: 45 ECTS, system engineering: 33 ECTS

2016

*MECHATRONICS ENGINEER – KARLSRUHE INSTITUTE OF TECHNOLOGY*

- As part of the German programme the 5<sup>th</sup> Semester is held in Karlsruhe

2014 – 2017

*BUSINESS, ECONOMICS SPEZIALIZATION – MATHIAS CORVINUS COLLEGIUM*

- Courses on microeconomics, business case studies and industry analysis

## **TECHNICAL SKILLS**

*PROGRAMMING*

- Solid knowledge of: LabVIEW, Python and C/C++
- Some knowledge of: JAVA and MATLAB

*DATA SCIENCE*

- Solid knowledge of: Neural Networks (Deep/recurrent networks)

- Familiar with: other ML methods (Regression, SVMs, K-means)
- Some experience of: BigData (Hive, Pig, MapReduce)

*MICROCONTROLLERS*

- Solid experience of: MyRIO, Arduino
- Some experience of: Raspberry Pi

*WEBDEVELOPMENT*

- Outstanding experience of: PHP, MySql
- Familiar with: CSS 3, HTML 5 programming languages, AJAX

**LANGUAGE SKILLS**

*ENGLISH*

Full working proficiency – IELTS Academic 7.5 Band Score

*GERMAN*

Excellent command – C1 Examination

*ITALIAN*

Basic communication skills

*CZECH*

Basic communication skills

**VOLUNTEERING**

*2017 SEPTEMBER*

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*2018 JANUARY*

*ROBOTICS CLUB OF TEMESVÁRI PELBÁRT HIGHSCHOOL*

- Co-founder and educator of my former high school's robotics club for 14-18 year-old students
- Robot building and programming with Arduino and C++

29.08.2018

Richárd Lengyel