Bálint Károly Farkas

EDUCATION

Óbuda University, Alba Regia Technical Faculty Székesfehérvár, Hungary
MSc in Engineering Informatics *September 2024 – Present*

Óbuda University, Alba Regia Technical Faculty Székesfehérvár, Hungary
MSc in Mechatronics Engineering – with distinction *September 2023 – June 2025*

Óbuda University, Alba Regia Technical Faculty Székesfehérvár, Hungary
Postgraduate Specialist in Industrial Robotics – with honors *February 2023 – February 2025*

Óbuda University, Alba Regia Technical Faculty Székesfehérvár, Hungary
BSc in Mechanical Engineering – with distinction *September 2019 – January 2023*

PROFESSIONAL EXPERIENCE

Székesfehérvár Science and Innovation Park Nonprofit Ltd. January 2024 – Present
Laboratory Engineer *Székesfehérvár, Hungary*

- PLC programming (Siemens TIA Portal)
- Development of Digital Twin systems for production cells
- Participation in PR activities and technical demonstrations
- Development of industrial robotics projects

Óbuda University, Alba Regia Technical Faculty May 2023 – Present
Department Engineer *Székesfehérvár, Hungary*

- Course material development for robotics-related subjects
- Development of robotics research and industrial projects
- Participation in research projects (industrial robotics and reinforcement learning)

Harman Becker Ltd. September 2022 – May 2023
Simulation Engineer *Székesfehérvár, Hungary*

- Simulation of manufacturing processes
- Support of RFI and RFQ processes in international projects
- Development of Harman's internal simulation standards

PUBLICATIONS

MTMT Author ID: 10099074

Farkas, B. K., Galambos, P., Széll, K. *Advances in Autonomous Robotic Grasping: An Overview of Reinforcement Learning Approaches.* IEEE 6th International Symposium on Logistics and Industrial Informatics (LINDI 2024), Karaganda, 2024.

Farkas, B. K., Széll, K., Galambos, P. *Establishing a Robotic Environment for Reinforcement Learning Study.* 18th International Symposium on Applied Informatics and Related Areas (AIS 2024), Székesfehérvár, 2024.

Farkas, B. K. *Evaluation of Reinforcement Learning Algorithms in a Robotic Simulation Environment.* Scientific Students' Association Conference (TDK 2025 Spring), Székesfehérvár, 2025. **Result:** 2nd place.

Awards

EKÖP Research Grant Winner 2024–2025 Project: Intelligent Robotic Arms: Reinforcement Learning for Grasping in Industrial Applications

EuroSkills Competition – Robot Systems Integration 2023 Silver Medal (2nd place), Gdańsk, Poland

WorldSkills Competition – Robot Systems Integration 2022 7th place, Luxembourg

Languages

English: Intermediate (B2), professional proficiency

Teaching and Mentoring Experience

Óbuda University, Alba Regia Technical Faculty   2023 – Present
Teaching Assistant   *Székesfehérvár, Hungary*
- Mentoring three student teams in the Youth Scientific Students' Association (IfjTDK)
- Supporting robotics education and course development