Ábel Ilyés-Kun

Computer Science Department, RWTH Aachen University
School of Computing, KAIST
Email: ikunabel@gmail.com | Website: ikunabel.github.io | Google Scholar | Github

Education

2023–Present	**RWTH Aachen University** MSc Computer Science
	• **Master's thesis** (ongoing): "Real-time Human-AI Improvisation over Jazz Standards" — supervised by Prof. Dr. Holger Hoos (Chair for Artificial Intelligence Methodology)
	• Research seminar on state-space models — supervised by Prof. Hector Geffner (Representation, Learning, and Planning Lab)
Fall 2024	**KAIST** MSc Computer Science Exchange Semester
	• **DUO-Korea Scholarship**
2019–2023	**RWTH Aachen University** BSc Computer Science
	• **Bachelor's thesis**: "A Survey of Optimization Tools and Objective Functions for Tuning Recurrent Spiking Networks with Dendritic Subunits" — supervised by Prof. Dr. Abigail Morrison (Institute for Advanced Simulation, Forschungszentrum Jülich)
2016–2019	**Goethe Gymnasium Bad Ems** A levels (Abitur)
	• Majors: English, Mathematics and Physics
	• **Graduate prize** for physics (DPG-Abiturpreis)

Publications

2025	**NeurIPS** 2025 AI4Music workshop paper (presented): *Lehmkuhl, J., Ilyés-Kun, Á., Bremes, N., Özaltan, C. K., Muthers, F., & Yuan, J. "Generating Piano Music with Transformers: A Comparative Study of Scale, Data, and Metrics."*

Research and Work Experience

2022–2023	**Bachelor's Thesis at Institute for Computational and Systems Neuroscience**
	• Hyper-parameter optimization for clustered spiking neural network with **Optuna**
	• Setting up **MySQL** database for parallel optimization on JURECA supercomputer
	• Managing jobscripts in cluster environment with **Slurm**
2021–2023	**Tutor at Research Group for Programming Languages and Verification**
	• Tutored students in Software Development (**Java**), Functional Programming (**Haskell**), Logic Programming (**Prolog**) and software **verification**
	• Gave weekly classes and assessed coding assignments
2021	**Lab Course at Cyber-Physical Mobility Lab**
	• Implemented trajectory planning and collision avoidance for model vehicles in **C++**
	• Organized workflow in team of six with **Scrum** and **Git**
March 2020	**Internship at BWI GmbH (IT solutions for Federal Government)**
	• Overview on project management and project organization (**Scrum**)
	• Introduction to current **JIRA**-projects at the company

Programming Stack

Programming Languages	Python, C, Java, C#, C++, SQL, Bash,
Frameworks & Systems	PyTorch, NumPy, Pandas, Matplotlib, Git, Linux, Slurm, Jupyter, Optuna

Languages and Hobbies

Languages	German (native), Hungarian (native), English (professional), French (intermediate), Dutch (elementary), Romanian (elementary)
Extracurricular Activities	창작동화 jazz band KAIST (2024–2025), Tennis Club Mixed-Vaals (2022), Rowing Club Bad Ems (2016–2019)
Interests	Jazz piano, K-pop, video editing, psychology, football, table tennis, tennis, running