# Timo Bertram

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### **EDUCATION**

# Johannes Kepler Universität

2020-Ongoing

PhD, Artificial Intelligence

Linz, AT

- GameAI topics such as drafting Magic: The Gathering decks and playing Reconnaissance Blind Chess
- Teaching Python, Java and Algorithms & Data Structures
- Under supervision of Johannes Fürnkranz and Martin Müller
- Supervising multiple BSc and MSc students in game-related topics

# University of Birmingham

2019-2020

MSc, Advanced Computer Science

Birmingham, GB

- Graduated with Distinction
- Strong focus on AI courses such as Evolutionary Algorithms and Neural Computation
- Thesis on combining Reinforcement Learning with Generative Adversarial Networks

### Rheinische Friedrich-Wilhelms-Universität

2015-2019

BSc, Informatics

Bonn, DE

- Wide area of courses, e.g. Algorithmic Complexity, Databases, Research Skills, AI, Software Engineering
- Thesis on hierarchical clustering

#### **PUBLICATIONS**

# Predicting Human Card Selection in Magic: The Gathering

Timo Bertram. Johannes Fürnkranz, Martin Müller in IEEE Conference on Games 2021

- Modeling card selection of human experts by constructing preferences between decisions
- Received best paper award

### A Comparison of Contextual and Non-Contextual Preference Ranking for Set Addition Problems

Timo Bertram. Johannes Fürnkranz, Martin Müller in ICML SubSet ML 2021

Comparing preferences modeled with and without context

## Quantity vs Quality: Investigating the Trade-Off between Sample Size and Label Reliability

Timo Bertram. Johannes Fürnkranz, Martin Müller as arXiv preprint

• Given a noisy labeler, should you rather acquire a large number of samples or improve the accuracy of a subset?

### Supervised and Reinforcement Learning from Observations in Reconnaissance Blind Chess

Timo Bertram. Johannes Fürnkranz, Martin Müller in IEEE Conference on Games 2022 (short paper)

Training a neural network to play partially observable chess

#### **REVIEWING ACTIVITIES**

IEEE Conference on Games 2022 Main and Vision Tracks, International Conference on Machine Learning 2022, 44th German Conference on Artificial Intelligence 2021, IEEE Conference on Games 2021 Analytics Track

### **SKILLS & INTERESTS**

- Skills: Python, Java, PyTorch, LaTeX, (Deep) Neural Networks, Reinforcement Learning, Supervised Learning,
  Tree Search, Evolutionary Algorithms,
- Interests: Powerlifting, Modern Board Games, Magic: The Gathering, Cooking, Food, Riddles, Escape Rooms