

Curriculum vitae

Moritz Willig



Personal data

Surname: Willig
First name: Moritz
Date of birth: 13.12.1993
Address: *(withheld)*
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Education

2018 - currently **M.Sc. Visual Computing**
Technical University of Darmstadt, Germany
GPA 1.96 (thesis grade pending)

2013 - 2018 **B.Sc. Computer Science**
Technical University of Darmstadt, Germany
GPA: 2.10

2010 - 2013 **General university entrance qualification ("Abitur")**
Werner von Siemens Schule, Wetzlar, Germany

Work experience

Summer term 2019 Tutor for "Learning to play Bughouse" project (*TU Darmstadt, Prof. Fürnkranz*)

2014 – 2019 Software developer at Datron AG (*student position / part time*)

Research interests

My research interests are in the area of high-level object description and representation learning in the visual domain. In particular, I'm interested in visual concept learning and feature emergence in neural networks.

Theses

Bachelor **Implementation and evaluation of coverage and hot- / coldspot promises**

Supervision by Prof. Christian Bischof, Ph.D. and Christian Iwainsky, Ph.D.

Master **Analysing and overcoming the dataset bias for optical flow backbone networks**

Supervision by Prof. Stefan Roth, Ph.D. and Junhwa Hur, M.Sc. [\[thesis\]](#) [\[source code\]](#)

Publications

Johannes Czech, Moritz Willig, Alena Beyer, Kristian Kersting and Johannes Fürnkranz, "[Learning to play the Chess Variant Crazyhouse above World Champion Level with Deep Neural Networks and Human Data](#)" in *Frontiers in Artificial Intelligence*, 2020

Previous work and projects

Datron AG

[\[https://www.datron.de/\]](https://www.datron.de/)

- Gesture recognition for milling workpieces.
- Reconstruction of the machine interior from camera images.
- Path planning of free-form pockets for CNC milling.

TU Darmstadt

[\[https://www.tu-darmstadt.de/\]](https://www.tu-darmstadt.de/)

- Extraction of working surfaces from 3d meshes.
 - HoloLens application (Visual Computing Project - Fraunhofer IGD).
- Crazyhouse Chess Engine "CrazyAra".
 - Repository: <https://github.com/QueensGambit/CrazyAra/>

Technical experience

Programming languages

Professional: Python, C/C++, C#

Intermediate: Pascal, Java, JavaScript

Tools and frameworks

PyTorch, TensorFlow, NumPy, Blender, OpenGL, Vulkan, Microsoft Mixed Reality API, Git, LaTeX

Public repositories

GitHub: <https://github.com/MoritzWillig/>