



## Aleksandar Anžel

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Born 06.08.1995.

 AAnzel

 AAnzel

 AleksandarAnzel

 <https://aanzel.github.io>

### WORK EXPERIENCE

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October 2021 – present

#### Data Scientist

eMedicals Healthtech GmbH, Frankfurt am Main

- Use analytical, statistical, and programming skills to collect, analyze, and interpret large medical and biological data sets. Manage algorithm development, machine learning workflows, and statistical techniques to produce solutions to problems quickly. Closely work with university partners (i.e., Technische Universität Darmstadt) and research organisations (i.e., Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V.) to improve and further develop algorithms relevant to the company. Co-manage hiring process and co-lead a small team of Data Scientists and ML Engineers.

December 2020 – present

#### Research assistant

Heider Lab, Philipps-Universität Marburg, Marburg

- Develop Bioinformatics and ML pipelines for Omics problems. Design, implement and evaluate automatic workflows for information storage systems that are based on the molecular storage media. Adapt existing and create new visualization methods for biological and medical data sets.

### EDUCATION

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2020 – present

#### Ph.D. degree in Computer Science

Philipps-Universität Marburg

August 2021

#### OxML summer school participant

Machine Learning summer school, University of Oxford

2018 – 2020

#### Master's degree in Mathematics

Module: Computer Science and Informatics

Faculty of Mathematics, University of Belgrade

- Average grade: 10.00 (out of 10.00)
- Thesis: *Determining protein N-glycosylation with machine learning methods*

2014 – 2018

#### Bachelor's degree in Mathematics

Module: Computer Science and Informatics

Faculty of Mathematics, University of Belgrade

- Average grade: 8.66 (out of 10.00)

### SKILLS

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#### Languages

Serbian – Native proficiency

English – Full professional proficiency

- Cambridge English: First (FCE): upper intermediate (B2 in CEFR)

German – Elementary proficiency

French – Elementary proficiency

**Computer Science**   Software Development

- C, Python, C++, Java, MATLAB, Shell, Haskell, Assembly IA-64, Assembly ARM-32

Machine Learning

- Keras, Tensorflow, Scikit-learn

Data Management

- SQL

Bioinformatics, Scientific Computing, Data Science, Visualization

**Document manipulation**    $\LaTeX$ , Libre Office Suite, Microsoft Office Suite

**Soft skills**

- Excellent organizational and communication skills
- Ability to work collaboratively with people at all professional levels
- Thoroughness, with rigorous attention to both detail and quality

## PROJECTS

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**Bioinformatics**

- *Determining protein N-glycosylation with machine learning methods*
- *Modification and analysis of UPGMA algorithm while using different metrics*
- *MOVIS: A Multi-Omics Software Solution for Multi-modal Time-Series Clustering, Embedding, and Visualizing Tasks*

**Computer Science**

- *Finding Waldo using various Machine Learning methods*
- *Image modification and correction with Python*
- *Determining integer variable ranges using Abstract Interpretation in C++ (LLVM, Clang)*
- *AVL trees in C programming language*

## SELECTED EVENTS

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2022   • *The 1st International Conference on Data Storage in Molecular Media*. Virtual. (attendee, co-host)

2021   • *IEEE Visualization Conference (VIS)*. Virtual. (attendee)

          • *Bio+Med+Vis Spring School*. Virtual. (attendee)

          • *Symposium on Interdisciplinary Bioinformatics and Biomedical Data Science (IBBMDS)*. Marburg, Germany. (presenter)

2020   • *IEEE Visualization Conference (VIS)*. Salt Lake City, Utah, USA. (attendee)

          • *Eurographics & Eurovis (EGEV)*. Norrköping, Sweden. (attendee)

## TEACHING

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2022   • *Guest lecture, Molecules as storage media for long-term data storage*. Faculty of Mathematics, University of Belgrade. Belgrade, Serbia. (presenter)

          • *Group student project (Projektarbeit), DNA Storage Encodings*. Department of Mathematics and Computer Science, University of Marburg. Marburg, Germany. (co-organizer, tutor)

          • *Seminar, Information Theory Tools for Visual Computing*. Department of Mathematics and Computer Science, University of Marburg. Marburg, Germany. (co-organizer, presenter)

2021   • *Group student project (Projektarbeit), DNA Storage Encodings*. Department of Mathematics and Computer Science, University of Marburg. Marburg, Germany. (co-organizer, tutor)

          • *Seminar, Information Theory Tools for Visual Computing*. Department of Mathematics and Computer Science, University of Marburg. Marburg, Germany. (co-organizer, presenter)

          • *Lecture, Data Visualization*. Department of Mathematics and Computer Science, University of Marburg. Marburg, Germany. (collaborator)

## ADVISING & SUPERVISION

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- 2022
- Jing Chen, B.Sc., Bioinformatics (BI). Department of Mathematics and Computer Science, University of Marburg. Marburg, Germany.
  - Fabio Rougier, M.Sc., Computer Science (CS). Department of Mathematics and Computer Science, University of Marburg. Marburg, Germany.
- 2021
- Fabio Rougier, M.Sc., Computer Science (CS). Department of Mathematics and Computer Science, University of Marburg. Marburg, Germany.

## PUBLICATIONS

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- 2022
- Anžel, A., Heider, D., & Hattab, G. (2022). *MOVIS: A multi-omics software solution for multi-modal time-series clustering, embedding, and visualizing tasks*. Computational and Structural Biotechnology Journal, 20, 1044–1055. 10.1016/j.csbj.2022.02.012
- 2021
- Anžel, A., Heider, D., & Hattab, G. (2021). *The Visual Story of Data Storage: From Storage Properties to User Interfaces*. Computational and Structural Biotechnology Journal, 1(1), 1. 10.1016/j.csbj.2021.08.031

## ADDITIONAL INFORMATION

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Driving licence    Category B (cars)

Interests    Technology, Research, Computer Science, Bioinformatics, Linux, FOSS, Science Fiction, Fantasy, The Matrix, Video games, Hiking