CURRICULUM VITAE   MANUEL WIDMOSER

Date of Birth	November 11, 1990	Email	m.widmoser@gmail.com
Citizenship	Austrian	Webpage	https://mwidmoser.github.io

EDUCATION

10/2021 – present   **University of Salzburg** – Doktor der technischen Wissenschaften (Dr. techn., equiv. to PhD)
Salzburg, Austria – ADVISOR: Nikolaus Augsten
- THESIS: "Scaling Similarity Queries to Massive Datasets"

10/2018 – 08/2021   **University of Salzburg** – Diplom-Ingenieur (Dipl.-Ing., equiv. to MSc)
Salzburg, Austria – Major: Computer Science (GPA: 1.2†)
- THESIS: "A Metric Solution for Large-Scale Set Similarity Joins" – ADVISOR: Nikolaus Augsten
- Extensive elective coursework in Database Systems and Computer Vision.

02/2019 – 07/2019   **Tel Aviv University** – Erasmus Student Exchange Program
Tel Aviv, Israel – Major: Computer Science
- Extensive elective coursework in Natural Language Processing and Bioinformatics.

10/2015 – 08/2018   **University of Salzburg** – Bachelor of Engineering (B.Eng.)
Salzburg, Austria – Major: Computer Science (GPA: 1.4†)
- THESIS: "Symbolic Execution with Selfie: Arithmetics" – ADVISOR: Christoph M. Kirsch
- Extensive coursework in Compilers and Systems Engineering.

EMPLOYMENT

02/2021 – 05/2022   **Celonis SE** – Working Student (Software Engineering)
Munich, Germany – Supervised by Willi Mann and Jessica Ambrosy
- Designed and implemented a set similarity join algorithm in C++ that improves over the current state of the art regarding datasets showing certain characteristics.
- The algorithm is currently under application for a patent.

07/2020 – 01/2021   **University of Salzburg** (in cooperation with Celonis SE) – Research Assistant
Salzburg, Austria – Supervised by Nikolaus Augsten and Daniel Kocher
- Worked in a team on an industry problem, where we designed and evaluated efficient clustering algorithms.

10/2017 – 06/2020   **University of Salzburg** – Teaching Assistant
Salzburg, Austria – Supervised by Nikolaus Augsten
- Assisted in teaching and material preparation for database systems classes.
- Developed a web tool in Python and Django that joins publications with conference statistics.

08/2019 – 09/2019   **Purdue University** – Visiting Scholar
West Lafayette, USA – Supervised by Dan Goldwasser and Jean Honorio
- Developed a randomized inference procedure in C++ and Python for structured prediction problems in NLP.
- Selected as one of eight participants nationwide for a two-month internship.

07/2018 – 09/2018   **Authentic Vision GmbH** – Intern (Research & Development)
Salzburg, Austria – Supervised by Christoph Scharf and Thomas Bergmüller
- Worked on fraud detection of corrupted holographic fingerprints by using machine learning techniques.

EARLIER EMPLOYMENT

03/2015 – 08/2015   **Hotel Sacher Salzburg** (5*S) – Chef de Partie – *Salzburg, Austria*
05/2012 – 01/2014   **Hotel Schloss Fuschl** (5*S) – Chef de Partie – *Hof bei Salzburg, Austria*
12/2010 – 04/2012   **Restaurant Heimatliebe** (Gault Millau score: 17) – Chef de Partie – *Kitzbühel, Austria*
05/2010 – 11/2010   **Austrian Armed Forces** – Obligatory Military Service – *St. Johann in Tirol, Austria*
12/2009 – 05/2010   **Restaurant Obauer** (Gault Millau score: 19) – Commis de Cuisine – *Werfen, Austria*
09/2006 – 08/2009   **Hotel Der Lärchenhof** (5*) – Apprentice as a Chef – *Erpfendorf, Austria*

---

†Austrian grading system

Research

[1] M. Widmoser, D. Kocher, N. Augsten
Scalable Distributed Inverted List Indexes in Disaggregated Memory
Accepted at *International Conference on Management of Data (SIGMOD)*, 2024
⚭ https://doi.org/10.1145/3654974

[2] M. Widmoser, D. Kocher, N. Augsten, W. Mann
MetricJoin: Leveraging Metric Properties for Robust Exact Set Similarity Joins
Accepted at *IEEE International Conference on Data Engineering (ICDE)*, 2023
⚭ https://doi.org/10.1109/ICDE55515.2023.00085

[3] M. Widmoser, M.L. Pacheco, J. Honorio, D. Goldwasser
Randomized Deep Structured Prediction for Discourse-Level Processing
European Chapter of the Association for Computational Linguistics (EACL), 2021
⚭ https://doi.org/10.18653/v1/2021.eacl-main.100

[4] A.S. Abyaneh, S. Bauer, C.M. Kirsch, P. Mayer, C. Mösl, C. Poncelet, S. Seidl, A. Sokolova, M. Widmoser
Selfie: Towards Minimal Symbolic Execution
Workshop on Modern Language Runtimes, Ecosystems, and VMs (MoreVMs), 2018
⚭ https://hal.archives-ouvertes.fr/hal-01852071

Teaching

- **UV Parallel and Distributed Data Management / PS Non-Standard Databases** (Summer Term 2024)
- **PS Databases I** (Summer Term 2024)
- **PS Databases II** (Winter Term 2023/24)

Conference Volunteering

EACL 2021   **European Chapter of the Association for Computational Linguistics**
Remote – Supervised by Gisela Vallejo
  ○ Organized and scheduled Zoom meetings for sessions and conference talks.
  ○ Managed pairings between other volunteers and session chairs.

ACSD 2018   **Austrian Computer Science Day**
Salzburg, Austria – Supervised by Christoph M. Kirsch

Certificates

August 2020   **Architecting with Google Kubernetes Engine**
Coursera – Provided by Google Cloud
⚭ https://coursera.org/share/2393cffb52df4dd01c86b790a8fc24b6

January 2020   **Deep Learning**
Coursera – Provided by DeepLearning.AI
⚭ https://coursera.org/share/03a4b4cc7a77eb7060c8085cd5668901

Skills and Interests

Languages	German (native), English (fluent)
Technologies	C++, Python, RDMA, SQL, Rust, Swift, Git, Java, TypeScript, C
Interests	Traveling, Guitar Playing, Music Production, Skateboarding, Reading