Tobias Vente

Mail • LinkedIn • GitHub • Google Scholar • Personal Website

EDUCATION

Ph.D. in Computer Science	Expected May 2026

Joint Ph.D. University of Siegen, Siegen, Germany & University of Antwerp, Antwerp, Belgium

M.Sc. in Computer Science	Jan 2019 - Aug 2021

University of Siegen, Siegen, Germany — GPA: 3.8/4

Student Exchange - M.Sc. in Computer Science	Aug 2018 - Jun 2019

University of Tulsa, Tulsa, OK, USA — GPA: 4/4

B.Sc. in Computer Science	Jan 2019

University of Siegen, Siegen, Germany

EMPLOYMENT HISTORY

SAP SE | *Internship* — Aug 2020 - Nov 2020
- Developed data visualizations to streamline SAP cloud platform persistence test procedures

SAP SE | *Internship* — Jun 2019 - Sep 2019
- Built resilient test infrastructure for SAP cloud platforms, reducing manual testing time by 30%

University of Siegen | *Teaching Assistant* — Oct 2017 - Sep 2020
- Coordinated laboratory sessions and designed exercises for the Algorithms and Data Structures course
- Coordinated laboratory sessions and designed exercises for the Object-Oriented and Functional Programming lecture

Faurecia Automotive GmbH | *Internship* — Oct 2017 - Sep 2020
- Designed and implemented databases for efficient storage of production data

NetFederation GmbH | *Internship* — Aug 2016 - Oct 2016
- Deployed an internal communication chat tool using ROCKET.CHAT for enhanced team collaboration

RESEARCH VISITS

Tsinghua University | *Department of Computer Science and Technology* — Feb 2025 - Mar 2025
- Research on automation techniques in recommender systems; under Prof. Min Zhang

University of Gothenburg | *Department of Applied Information Technology* — Feb 2024 - Mar 2024
- Research on recommender systems' energy use and environmental impact; under Prof. Alan Said

University of Antwerp | *ADReM Research Group* — Jan 2024 - Feb 2024
- Research on efficient collaborative filtering recommender systems algorithms; under Prof. Bart Goethals.

TECHNICAL SKILLS & RESEARCH INTERESTS

Programming:	Python, C, C++, Java, SQL
Frameworks:	Pytorch, Scikit-Learn, Git, Numpy, Pandas, Scipy
Research Focus:	model evaluation, (automated) recommender systems, recommendation algorithms, machine learning
Soft Skills:	team work, critical thinking, problem solving, creativity
Languages Spoken:	English, German, Spanish (basic)

HONORS & ACCOLADES

Germany | *Full Scholarship of the Konrad Adenauer Foundation* — Oct 2017 - Dez 2021
- Scholarship holder of the scholarship program for gifted students

Tulsa, OK, USA | *Presidential Honor Award* — Jun 2019
- Award for outstanding academic performance

OPEN-SOURCE PROJECTS

EMERS | *EMERS: Energy Meter for Recommender Systems* — **GitHub:** ISG-Siegen/emers

LensKit-Auto | *An automated (AutoRecSys) toolkit for offline evaluation based on LensKit* — **GitHub:** ISG-Siegen/lenskit-auto

ACADEMIC SERVICES & HONORARY ACTIVITIES

Peer Reviewer   Since Jan 2023

For the AutoML23, SIGIR24, and RecSys24

Chairman *Musikverein Bilstein 1888 e.V.*   Since Jan 2024

With 65 active musicians and 20 young musicians currently undergoing music education.

Math Tutor   Since Mar 2015

For children in my hometown who struggle with math.

RAISED FUNDING

2024 | *Raised Funding*

- DAAD Kongressreiselprogramm (for attending ACM RecSys Conference 2024)
- ACM RecSys Europe School 2024 Student Grant
- ERASMUS+ Short-Term Doctoral Mobility (for a research visit to Gothenburg, Sweden)
- ERAMSUS+ Short-Team Doctoral Mobility (for an internship at the University of Antwerp, Belgium)

2023 | *Raised Funding*

- ACM RecSys Conference 2023 Student Grant
- ACM RecSys Summer School 2023 Student Grant

PEER-REVIEWED ACADEMIC PUBLICATIONS

Conferences:

1. | *Checky, the Paper-Submission Checklist-Generator for Authors, Reviewers and LLMs*

    J. Beel, B. Gipp, D. Jannach, A. Said, L. Wegmeth, **T. Vente**   ECIR 2025 (Demo Paper)

2. | *From Clicks to Carbon: The Environmental Toll of Recommender Systems*

    T. Vente, L. Wegmeth, A. Said, J. Beel   ACM RecSys 2024 (Full Paper, Reproducibility Paper)

3. | *Recommender Systems Algorithm Selection for Ranking Prediction on Implicit Feedback Datasets*

    L. Wegmeth, **T. Vente**, J. Beel   ACM RecSys 2024 (LBR Paper)

4. | *Revealing the Hidden Impact of Top-N Metrics on Optimization in Recommender Systems*

    L. Wegmeth, **T. Vente**, L. Purucker   ECIR 2024 (Full Paper)

5. | *From Theory to Practice: Implementing and Evaluating e-Fold Cross-Validation*

    C. Mahlich, **T. Vente**, J. Beel   CAIMLR 2024 (Full Paper)

6. | *Introducing LensKit-Auto, an Experimental Automated Recommender System (AutoRecSys) Toolkit*

    T. Vente, M.D. Ekstrand, J. Beel   ACM RecSys 2023 (Demo Paper)

7. | *Advancing Automation of Design Decisions in Recommender System Pipelines*

    T. Vente   ACM RecSys 2023 (Doctoral Symposium)

Workshops:

1. | *Greedy Ensemble Selection for Top-N Recommendations*

    T. Vente, Z. Mehta, L. Wegmeth, J. Beel   ACM RecSys 2024 (RobustRecSys Workshop (Full Paper))

2. | *Removing Bad Influence: Identifying and Pruning Detrimental Users in Collaborative Filtering Recommender Systems*

    P. Meister, L. Wegmeth, **T. Vente**, J. Beel   ACM RecSys 2024 (RobustRecSys Workshop (Short Paper))

3. | *EMERS: Energy Meter for Recommender Systems*

    L. Wegmeth, **T. Vente**, A. Said, J. Beel   ACM RecSys 2024 (RecSoGood Workshop (Short Paper))

4. | *e-Fold Cross-Validation for Recommender-System Evaluation*

    M. Baumgart, L. Wegmeth, **T. Vente**, J. Beel   ACM RecSys 2024 (RecSoGood Workshop (Short Paper))

5. | *Sustainable Recommender Systems: Optimizing Dataset Size for Energy-Efficient Algorithm Performance*

    A. Arabzadeh, **T. Vente**, J. Beel   ACM RecSys 2024 (RecSoGood Workshop (Short Paper))

6. | *The Effect of Random Seeds for Data Splitting on Recommendation Accuracy*

    L. Wegmeth, **T. Vente**, L. Purucker, J. Beel   ACM RecSys 2023 (PERSPECTIVES Workshop)