

Doğukan Bağcı

Incoming PhD Student | Max Planck Institute for Informatics

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Google Scholar | GitHub | LinkedIn

Research Interests

Explainability of Foundation Models, Computer Vision, Deep Learning — with a focus on understanding the internal representations of foundation models and leveraging XAI insights for downstream benefits.

Education

Oct 2023 – Present **M.Sc. Autonomous Systems and Robotics**
Technical University of Darmstadt, Germany
Current Grade: 1.51 (1.0 Best; 4.0 Worst)

Feb 2025 – Jun 2025 **Exchange Semester**
ETH Zurich & University of Zurich, Switzerland
Relevant Courses: 3D Vision, Advanced Machine Learning

Aug 2022 **Summer School “Human-Centered Machine Learning”**
Aalto University, Helsinki, Finland

Nov 2020 – Sep 2023 **B.Sc. Business Information Systems**
Technical University of Darmstadt, Germany
Final Grade: 1.48 (1.0 Best; 4.0 Worst)

Academic Experience

Starting April 2026 **PhD Student**
Max Planck Institute for Informatics, Saarbrücken, Germany
Research Assistant, supervised by Prof. Dr. Bernt Schiele & Robin Hesse

Oct 2025 – Mar. 2026 **Research Internship for Graduate Students**
Max Planck Institute for Informatics, Saarbrücken, Germany
Master’s thesis research, supervised by Prof. Dr. Sc. Simone Schaub-Meyer & Robin Hesse

Mar 2025 – Oct 2025 **Graduate Student & Scholarship Holder**
Konrad Zuse School of Excellence in Learning and Intelligent Systems (ELIZA)
Darmstadt, Germany

Jul 2025 – Dec 2025 **Student Research Assistant**
Visual Inference Lab, TU Darmstadt, Germany

- Jun 2023 – Jan 2025 **Student Research Assistant**
Visual Inference Lab, TU Darmstadt, Germany
Collaborative research project with Max-Planck Institute for Informatics;
Tutor for “Computer Vision 2” & website maintenance
- Jan 2024 – Feb 2024 **Student Research Assistant**
Institute of Automotive Engineering, TU Darmstadt
AUTOtech.agil project
- May 2022 – Jun 2022 **Student Assistant**
Department of Software & Digital Businesses, TU Darmstadt
Administration & website maintenance

Publications

- TMLR 2026 **Beyond Accuracy: What Matters in Designing Well-Behaved Models?**
Robin Hesse*, **Doğukan Bağcı***, Bernt Schiele, Simone Schaub-Meyer, Stefan Roth
* Equal contribution | *Featured Certification*
[\[Project Page\]](#) [\[Code\]](#)

Theses & Research Projects

- Sep 2025 – Present **Towards More Monosemantic Foundation Models**
Master Thesis | TU Darmstadt, Zuse School ELIZA, MPI for Informatics
Supervised by Prof. Dr. Sc. Simone Schaub-Meyer & Prof. Dr. Bernt Schiele
- Feb – Jun 2025 **Architect3D: Improving Mask Quality for Open-Vocabulary Pipelines**
Research Project | ETH Zurich
Supervised by Prof. Dr. Marc Pollefeys, Ayca Takmaz & Elisabetta Fedele
- Feb – Jun 2025 **RoPE Walk on Wall Street: Time Series Forecasting with Enhanced Transformers**
Research Project | University of Zurich
Supervised by Prof. Dr. Lena A. Jäger & David R. Reich
- Apr – Sep 2024 **Robustness of Phrase Grounding Models using Corrupted Linguistic Dependencies**
Research Project | TU Darmstadt
Supervised by Prof. Dr. Marcus Rohrbach & Jonas Grebe
- May – Aug 2023 **Identifying Factors that Influence Trust in Autonomous Vehicles**
Bachelor Thesis | TU Darmstadt, Campus FreeCity
Supervised by Prof. Dr. Peter Buxmann & Adrian Glauben
- Oct 2022 – Mar 2023 **Feedback App Plugin for MS Teams**
IT-Project | TU Darmstadt & Campana & Schott GmbH
Supervised by Prof. Dr. Peter Buxmann & Dr. Nihal Wahl
- Aug 2022 **Predicting Changes in Exchange Rates**
Research Project | Aalto University
Supervised by Prof. Alexander Jung

Awards & Honors

2026	Featured Certification — TMLR, for “Beyond Accuracy”
2023	Deutschlandstipendium — National Scholarship, Germany
2022	Deutschlandstipendium — National Scholarship, Germany
2021	Deutschlandstipendium — National Scholarship, Germany

Technical Skills

Languages	Python, Java, C++
Frameworks	PyTorch, Timm, NumPy, SciPy, Matplotlib, Transformers
Tools	Git/GitHub, \LaTeX
Languages	German (Native), Turkish (Native), English (C1)

Interests

Strength Training, Trailrunning, Traveling, Cooking, Soccer