Berker Demirel

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EDUCATION

- **Institute of Science and Technology Austria**
  PhD Candidate in Computer Science
  Vienna, Austria
  Sep 2023 - Current

- **Sabanci University**
  Masters in Computer Science; GPA: 3.91
  Istanbul, Turkey
  Sep 2021 - June 2023

- **Sabanci University**
  BS Computer Science and Engineering, BA Economics (DM) and Mathematics (Minor); GPA: 3.84
  Istanbul, Turkey
  Sep 2015 - Jun 2021

SKILLS SUMMARY

- **Languages:** Python, C++, Java, C, Go, Unix scripting
- **Tools:** PyTorch, MATLAB, OpenMP, GIT, CUDA, CPLEX

PUBLICATIONS

- Berker Demirel, Marco Fumero and Francesco Locatello, **Look Around and Find Out: OOD Detection with Relative Angles**, arXiv preprint arXiv:2410.04525, 2024.
- Berker Demirel, Lingjing Kong, Kun Zhang, Theofanis Karaletsos, Celestine Mendler-Dünner and Francesco Locatello, **Adjusting Pretrained Backbones for Performativity**, arXiv preprint arXiv:2410.04499, 2024.
- Berker Demirel and Huseyin Ozkan, **Decompl: Decompositional learning with attention pooling for group activity recognition from a single volleyball image**, in 2024 IEEE International Conference on Image Processing (ICIP). IEEE.
- Berker Demirel, Erchan Aptoula and Huseyin Ozkan, **ADRMX: Additive Disentanglement of Domain Features with Remix Loss**, arXiv preprint arXiv:2308.06624, 2023.
- Arda Asik, Bugra Demir, Berker Demirel, Kamer Kaya and Baris Batuhan Topal, **Vertex Ordering Algorithms for Graph Coloring Problem**, IEEE Signal Processing and Communications Applications, 2020.

RESEARCH EXPERIENCE

- **ICHEC (Irish Centre for High End Computing)**
  Research Intern - Prof. Buket Benek Gursoy
  Dublin, Ireland
  Jun 2020 - Aug 2020
  - Participated in the project "GPU Acceleration of Breadth-First Search algorithm in applications of Social Networks" for two months.
  - Proposed 7 different Direction Optimized BFS algorithms for CUDA and created a benchmark.

- **Erasmus University Rotterdam**
  Research Intern - Prof. Ilker Birbil
  Rotterdam, Netherlands
  Jun 2019 - Aug 2019
  - Implemented Policy-Gradient based and Value based Reinforcement Learning Algorithms to solve Graph Coloring Problem
  - Prepared a technical report about proposed algorithms and presented the study to the supervisor

TEACHING EXPERIENCE

- **Instute of Science and Technology Austria**
  Teaching Assistant
  Klosterneuburg, Austria
  Sep 2024 - Current
  - **Course:** Modern Machine Learning
  - Holding weekly recitation hours
  - Preparing and grading homeworks.

- **Sabanci University**
  Teaching Assistant
  Istanbul, Turkey
  Sep 2021 - 2023
  - **Courses:** Machine Learning, Introduction to Computing, Advanced Computing, and Data Structures
  - Held weekly recitation sessions and office hours.
  - Produced supplementary lecture materials, prepared and graded programming homeworks.
  - As a coordinating TA, handled all the announcements to the class of 200+ students and worked closely with other assistants to help them prepare and grade homeworks.

- **Sabanci University**
  Moderator
  Istanbul, Turkey
  Sep 2016 - Jan 2017
  - **Courses:** Calculus 1/2 (MATH 101/2), Natural Sciences 1/2 (NS 101/2), Linear Algebra (MATH201)
  - Prepared content for exam preparation and general review, 6 hours per week.
  - Conducted weekly study sessions to audiences up to 80 students.

Honors and Awards

- Ranked 1st among batch of 20 students in the Department of Economics at Sabanci University.

- Ranked 5th among batch of 90 students in the Department of Computer Science & Engineering at Sabanci University.

- Dean's High Honor List, 2015-2021.

- Honor scholarship for 5 years, awarded for ranking 1878th out of approximately 2 million people in a nationwide university admission exam.