Berker Demirel

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EDUCATION

Institute of Science and Technology Austria

PhD Candidate in Computer Science

Vienna, Austria Sep 2023 - Current

Email: berker.demirel@ist.ac.at

Sabanci University

Masters in Computer Science; GPA: 3.91

Istanbul, Turkey Sep 2021 - June 2023

Sabanci University

Istanbul, Turkey

BS Computer Science and Engineering, BA Economics (DM) and Mathematics (Minor); GPA: 3.84

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)

Dublin, Ireland

Research Intern - Prof. Buket Benek Gursoy

Jun 2020 - Aug 2020

- o 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

Rotterdam, Netherlands

Research Intern - Prof. Ilker Birbil

Jun 2019 - Aug 2019

- o 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

Klosterneuburg, Austria

Teaching Asistant

Sep 2024 - Current

- o Course: Modern Machine Learning
- o Holding weekly recitation hours
- Preparing and grading homeworks.

Sabanci University

Teaching Asistant

Istanbul, Turkey Sep 2021 - 2023

o Courses: Machine Learning, Introduction to Computing, Advanced Computing, and Data Structures

- o 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

Istanbul, Turkey

Moderator

Sep 2016 - Jan 2017

- o 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.
- $\bullet\,$ 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.