

CONTACT INFORMATION

Email idilsulo@gmail.com Web idilsulo.github.io

Google Scholar

EDUCATION

Technical University of Munich (TUM)

Munich, Germany

M.Sc., Computer Science

2019-2023

Master's Thesis – Compositional Zero-shot Point Cloud Classification with Vision-Language Model Embeddings at TUM CAMP supervised by PD Dr. Federico Tombari.

Middle East Technical University (METU)

Ankara, Turkey

B.Sc., Computer Engineering

2014-2019

Studied one year at the English Language Preparatory School of METU.

PUBLICATIONS

- [1] **Idil Sulo**, Evin Pinar Ornek, Nassir Navab, and Federico Tombari, OpenPart: Compositional Open Vocabulary Point Cloud Understanding, *Under review*, 2023.
- [2] Qadeer Khan, **Idil Sulo**, Melis Ocal, and Daniel Cremers, Learning Vision Based Autonomous Lateral Vehicle Control Without Supervision, *Applied Intelligence, Springer*, 2023. [Paper].
- [3] Fatih Can Kurnaz, Burak Hocaoglu, Mert Kaan Yilmaz, **Idil Sulo**, and Sinan Kalkan, ALET (Automated Labeling of Equipment and Tools): A Dataset for Tool Detection and Human Worker Safety Detection", *European Conference on Computer Vision (ECCV) Workshops*, 2020. [Paper].
- [4] Idil Sulo, Seref Recep Keskin, Gulustan Dogan, and Theodore Brown, Energy Efficient Smart Buildings: LSTM Neural Networks for Time Series Prediction, in *The International Conference on Deep Learning and Machine Learning in Emerging Applications (DEEP-ML)*, 2019. [Paper].

RESEARCH EXPERIENCE

Computer Vision Group, Technical University of Munich Munich, Germany Student Researcher Apr 1, 2021 - Feb 28, 2023

- Worked on self-supervised imitation learning for vehicle control based on pose estimation (SLAM), view synthesis and Model Predictive Control supervised by Prof. Daniel Cremers.
- Extended the framework to multiple sensor modalities to study robustness to sensor failures.
- Published at Applied Intelligence journal.

KOVAN Robotics Research Lab, METU

Ankara, Turkey

Undergraduate Student Researcher

Feb 1, 2019 - Jun 30, 2019

- Worked on an intelligent robot platform that functions as an apprentice to human workers working in factory assembly lines co-supervised by Prof. Sinan Kalkan and Prof. Erol Sahin.
- Developed a module to predict the pose of human workers in real-time from Kinect data.
- Supported creation of a tool detection dataset and worked on a neural network model to demonstrate a possible use-case of the dataset for safety purposes.
- Published at ECCV 2020 Workshops.

City University of New York

New York, NY, United States

Undergraduate Student Researcher (Remote)

Oct 1, 2018 - Jun 30, 2019

- Developed an LSTM to help forming of smart buildings by predicting their energy consumption.
- Published at DEEP-ML.

ImageLab, Middle East Technical University

Ankara, Turkey

Computer Vision Research Intern

Jun 25, 2018 - Sep 21, 2018

 Worked on reducing the computational cost of GANs (e.g. WGAN) with Depthwise Separable Convolution layers of MobileNet architecture under the supervision of Prof. Gokberk Cinbis.

INDUSTRY EXPERIENCE

Christie's

Data Science Intern (Remote)

London, United Kingdom

May 3, 2022 - Sep 30, 2022

- Worked on ablation studies on cross-modal tasks such as image captioning, visual question answering and visual grounding for visual arts.
- Performed fine-tuning of vision-language models (e.g. BLIP and OFA-Sys).

Amazon Web Services (AWS)

Berlin, Germany

Software Development Engineer Intern, AWS AI - DevOps

Aug 15, 2021 - Jan 14, 2022

- Worked on a knowledge base system to manage, sort and categorize a growing amount of entities and their relationships to present in a centralized way.
- Collaborated with research scientist to deploy NLP models.

Unetiq

Munich, Germany

Data Scientist (Part-Time)

Nov 11, 2019 - Jul 1, 2020

- Ground Control Project Developed neural network models based on sensor readings to determine rail track quality.
- Linde Project Analyzed the costs based on key quantities.
- Corona-AI Project Worked on prediction of the mortality status of patients based on the first 24 hours of ICU stay, in collaboration with University Hospital Regensburg, Germany.

Darkblue Telecommunication Systems

Ankara, Turkey

Software Developer

Jun 11, 2019 - Aug 1, 2019

 Worked on a research and development of a real-time system using Support Vector Machines to classify face images of the people using C++ and Dlib.

AWARDS & SERVICES

CVPR - Reviewer

 $\mathbf{CVPR}\ \mathbf{2023},\ \mathbf{NeurIPS}\ \mathbf{2020},\ \mathbf{ICML}\ \mathbf{2020},\ \mathbf{ISMIR}\ \mathbf{2020} - \mathbf{Conference}\ \mathbf{Grant}$

Scientific and Technological Research Council of Turkey (TÜBİTAK) – 2209/A University Students Research Project Grant, 2019

Middle East Technical University – Honor Roll (Spring 2015, Fall 2017, Spring 2018), High Honor Roll (Spring 2017, Fall 2018)

Grace Hopper Celebration 2022 (vGHC'22) – IFF Gender & Diversity Grants, Technical University of Munich

HackZurich 2021 – Winner of IBM & the Literoom Workshop, "Digitally Enabling the Artist"

Guinness World Record – Participant of the "Largest Code Debugging / Bug Fixing Competition"

SKILLS

Programming Languages – Python, C/C++

Libraries, Frameworks and Tools – Python Data Science/Deep Learning Stack (Py-Torch, NumPy, SciPy, scikit-learn, Matplotlib, Pandas, Jupyter); **2D/3D Computer Vision** (OpenCV, CARLA, Open3D, PyTorch3D); **Cloud Technologies** (AWS, Google Cloud, Azure); **Web Technologies** (HTML, CSS, Jekyll); CUDA, LATEX, Git

Operating Systems – Unix/Linux, Windows

Languages – Turkish (Native), English (Advanced), German (Intermediate)

EXTRA-CURRICULAR ACTIVITIES

Women in CS @ TUM (Informatik-Forum Frauen, IFF)

Munich, Germany Apr 2022 - Present

Events Team Lead

Django Girls

Ankara, Turkey

Organizer & Mentor

2018

Coding Woman

Blogger

Jan 2018 - Present