İdil Sülo

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
Graduation Project – A platform to make neural networks available as an online service.

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", *ECCV-W*, 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 *DEEP-ML*, 2019. [Paper].

RESEARCH EXPERIENCE

Massachusetts Institute of Technology **Cambridge, MA, United States**
MIT Summer Geometry Initiative (SGI) Fellow Jul 8, 2024 - Aug 16, 2024

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

- Performed self-supervised imitation learning for vehicle control based on pose estimation (SLAM), view synthesis and Model Predictive Control under the supervision of 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 trained a neural network model to demonstrate a possible use-case of the dataset for safety purposes, and published at ECCV Workshops.

City University of New York **New York, NY, United States (Remote)**
Undergraduate Student Researcher Oct 1, 2018 - Jun 30, 2019

- Enabled forming of smart buildings by predicting their energy consumption using LSTM.

ImageLab, Middle East Technical University **Ankara, Turkey**
Computer Vision Research Intern Jun 25, 2018 - Sep 21, 2018

- Helped 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

Deltia — **Berlin, Germany (Remote)**
Computer Vision Engineer Intern — Feb 1, 2024 - Present

- Working on an ergonomics project based on 3D human pose estimation and SMPL to form 3D digital humans for anonymization of workers and to ensure health and safety in the long term.

Christie's — **London, United Kingdom (Remote)**
Data Science Intern — May 3, 2022 - Sep 30, 2022

- Performed ablation studies on cross-modal tasks such as image captioning, visual question answering and visual grounding for visual arts.
- Fine-tuned 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

- Established 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

- Supported customers with project-based AI solutions by developing neural networks for quality estimation and health status prediction.
- Analyzed customer data to provide project cost estimation.

AWARDS & SERVICES

CVPR – Reviewer
CVPR 2023, NeurIPS 2020, ICML 2020, ISMIR 2020 – Conference Grant
Scientific and Technological Research Council of Turkey (TÜBİTAK) – 2209/A University Students Research Project Grant, 2019
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** (PyTorch, 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**
Events Team Lead — Apr 2022 - Present

Django Girls — **Ankara, Turkey**
Organizer & Mentor — 2018

Coding Woman
Blogger — Jan 2018 - Present