

# İdil Sülo

Master's Student in Computer Science

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## Education

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### Technical University of Munich (TUM)

Munich, GERMANY

M.Sc. in Informatics (Computer Science)

October, 2019 - Present

- A graduate student with an emphasis on Deep Learning and Computer Vision.
- Taking part in a research project for Self-Driving Cars and Intelligent Systems at TUM Computer Vision Group during winter semester 2020.

### Middle East Technical University (METU)

Ankara, TURKEY

B.Sc. in Computer Engineering

September, 2014 - June, 2019

- Studied one year at the English Language Preparatory School of METU.
- **Graduation Project:** DLEM - A project that will make deep learning networks available as an online service and greatly simplify the testing of the existing networks by the users using ONNX format.

## Skills

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**Programming Languages** Python, C/C++

**Libraries, Frameworks and Tools** PyTorch, Tensorflow, NumPy, SciPy, Matplotlib, Pandas, OpenCV, Dlib, LaTeX, Git

**Operating Systems** Unix/Linux, Windows

**Languages** Turkish (Native), English (Advanced), German (Beginner)

## Experience

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### Unetiq

Munich, GERMANY

Data Scientist (Part-Time)

November 11, 2019 - July 1, 2020

- **Ground Control Project:** Developed an environmental project that aims to determine rail track quality by developing neural network models based on sensor readings, and to minimize the downtime of the public rail transport with predictive maintenance.
- **Linde Project:** Analyzed the costs of different projects of Linde based on several key quantities such as the plant type, country and execution period.
- **Corona-AI Project:** Worked on the prediction of the mortality status of COVID-19 patients based on the first 24 hours of ICU stay with the data obtained from the patients in University Hospital Regensburg, Germany.

### Darkblue Telecommunication Systems

Ankara, TURKEY

Software Developer

June 11, 2019 - August 1, 2019

- Worked on a research and development project for the implementation of a real-time system using Support Vector Machine (SVM) model to classify face images of the people using C++ and Dlib.

### KOVAN Robotics Research Lab, Middle East Technical University

Ankara, TURKEY

Undergraduate Student Researcher

February 1, 2019 - June 30, 2019

- Worked on a project on an "intelligent" robot platform that is developed to function as an apprentice for the human workers working in factory assembly lines under the supervision of **Prof. Sinan Kalkan** and **Prof. Erol Sahin**.
- Developed a module in order to predict the pose of human workers in real-time given the data captured by Kinect cameras.
- Supported creation of the METU ALET dataset for detecting tools with scenes that introduce several challenges for object detection. In addition, I have worked on a deep neural network model to check whether a human worker is wearing a helmet to demonstrate a possible use-case of our dataset such as safety purposes.
- A paper demonstrating this work is presented at **Turkey Robotics Conference (TORK 2019)** in rapid communication format. Further research on this work is still being undertaken.

## City University of New York

New York, NY, United States

Undergraduate Student Researcher (Remote)

October 1, 2018 - June 30, 2019

- Worked on a project to apply deep learning methods on the energy consumption data obtained from the buildings that reside in the City University of New York (CUNY) campuses under the supervision of **Prof. Theodore Brown**.
- Developed a recurrent neural network model to help forming of energy efficient smart buildings by predicting their energy consumption.
- This work is supported by the **Scientific and Technological Research Council of Turkey (TÜBİTAK)** through the scope of the **scholarship programme 2209/A University Students Research Project Grant** which I am the recipient of.
- This work had been personally presented by me at **The International Conference on Deep Learning and Machine Learning in Emerging Applications (DEEP-ML 2019)**.

## ImageLab, Middle East Technical University

Ankara, TURKEY

Computer Vision Research Intern

June 25, 2018 - September 21, 2018

- Participated in a research of reducing the computational cost of Generative Adversarial Networks inspired by the MobileNet architecture with an application of the Depthwise Separable Convolution layers under the supervision of **Prof. Gokberk Cinbis**.

## CITS Bilisim (Cloud Information Technology Services)

Bursa, TURKEY

Software Development Intern

July 3, 2017 - September 22, 2017

- Designed and implemented an algorithm to optimize the problem of cutting large sheets of metals into specific sizes.
- Created a web application constructed with ASP.NET Core, MVC 6, EF Core, and Angular which lets the user to create a travel plan on a world map.

## Publications

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- F. C. Kurnaz, B. Hocaoglu, K. M. Yilmaz, **I. Sulo**, and S. Kalkan, "**ALET (Automated Labeling of Equipment and Tools): A Dataset, a Baseline and a Usecase for Tool Detection in the Wild**", *arxiv preprint*, 2019.
- F. C. Kurnaz, B. Hocaoglu, K. M. Yilmaz, **I. Sulo**, and S. Kalkan, "**ALET: Gerçek Ortamlarda Aletlerin Tespiti için Veri Kümesi, Baz Sonuçlar ve Bir Uygulama**", in Turkey Robotics Conference (TORK), June 2019.
- **I. Sulo**, S. R. Keskin, G. Dogan, and T. 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), August 2019.

## Cocurricular Activity

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### Hackathon Project: Change the Way You Listen

HAMR2020

October, 2020

Deployed a web application that illustrates the listening history of the user in the last 6 months across genres and creates a playlist for Spotify users based on their most listened genres and provided audio features. [ [Source](#) | [Website](#) ]

### Fundamentals of Deep Learning for Computer Vision

NVIDIA

Participant

September, 2018

Participated in a workshop by NVIDIA Deep Learning Institute that teaches the basics of deep learning by training and deploying neural networks. The certificate of this workshop can be verified [here](#).

## Extracurricular Activity

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### Coding Woman

Blogger

January, 2018 - Present

Sharing anecdotes from my life as a woman studying computer science by explaining some technical concepts, and writing articles supporting women in technology in order to break the stereotypes in the minds of people related to this field on a blog named Coding Woman. The blog can be found on the following link: [www.codingwoman.com](http://www.codingwoman.com)

### Django Girls

Co-Organizer and Mentor

October, 2018 - June, 2019

Organized one-day programming workshops together with the members of Django Girls Ankara in order to bring more amazing women into the world of technology and increase the diversity in the Django community.