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Cengiz Avcı

Data Scientist

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I am a Geomatics Engineer currently pursuing a Master's degree in Satellite Communication and Remote Sensing at Istanbul Technical University, which I will be completing in July 2024. My thesis focuses on transformer-based semantic segmentation models. My professional experience includes roles as a Data Scientist, Machine Learning Engineer, and Research Assistant, where I applied deep learning algorithms to a variety of tasks such as agricultural boundary delineation, land use/land cover segmentation, and road extraction from historical maps. I possess a strong skill set in Python, PyTorch, and a wide range of deep learning tools. Additionally, I have extensive experience with implementing state-of-the-art Hugging Face models. My research has been published in reputable journals, reflecting my commitment to advancing the field of data science.

TECHNICAL EXPERIENCE

Geospatial Data Scientist

June 2023 — Present

Doktar (İTÜ ARI3 Teknokent - Netherlands Wageningen University) - Agri-tech company

Istanbul, Turkey

- Boundary Delineation for Agricultural fields with Deep Learning Algorithms
- Land Use Land Cover Classifications - Crop Classifications using ML technics with Python

Machine Learning Engineer at FarmOn (Freelance)

March 2023 — June 2023

FarmOn

Remote, Netherlands

- I used the autogluon library to train a crop classification model on Microsoft Planetary computers, utilizing yearly NDVI values to classify agricultural areas.
- Developed a climate resemblance application and published on streamlit for assessing the alignment between current and projected future climates of different locations. [Click to see an example from my LinkedIn post.](#)

Research Assistant at Koç University

November 2021 — March 2023

UrbanOccupationsOETR Project

Istanbul, Turkey

- Created a multiple segmentation datasets from historical aerial and satellite imageries from 1950 to 1970
- Road Extraction and LU/LC segmentation via using Deep Learning algorithms from Historical Maps using Pytorch Segmentation models

SKILLS

Programming

Python, Docker, SQL and No-SQL, JavaScript

Tools

Pytorch, Huggingface Models, AWS, Azure, Docker, Google Earth Engine

Research

Data Science, Computer Vision, Transformers, Remote Sensing, Agriculture

Hobbies

Calisthenics, Swimming

Certificates

[My Certificates \(Click to see them in LinkedIn\)](#)

EDUCATION

Master of Science in Satellite Communication and Remote Sensing, *Istanbul Technical University*

February 2022 - Present

Bachelor of Science in Geomatics Engineering, *Istanbul Technical University*

2017 - January 2022

RESEARCH - ARTICLES

Deep Learning-Based Land Use Land Cover Segmentation of Historical Aerial Images

July 2023

IGARSS - IEEE International Geoscience and Remote Sensing Symposium

Published

- Authors: Cengiz Avcı, Prof.Dr. Elif Sertel and Dr. M. Erdem Kabadayı

Deep Learning Based Road Extraction from Historical Maps

March 2022

IEEE Geoscience and Remote Sensing Letters

Published

- Authors: Cengiz Avcı, Prof.Dr. Elif Sertel and Dr. M. Erdem Kabadayı

Comparison Between Random Forest and Support Vector Machine Algorithms for LULC Classification

August 2021

International Journal of Engineering and Geosciences - DergiPark

Published

- Authors: Cengiz Avcı, Muhammed Budak, Nur Yağmur, Assoc.Prof. Filiz Bektaş Balçık

Google Earth Engine Machine Learning Talk for School of AI

January 2021

- I presented a lecture at the School of AI on machine learning and remote sensing applications aimed at addressing climate change issues, utilizing the Google Earth Engine platform, where I showcased and explained various projects.

REFERENCES

- **Prof. Dr. Elif Sertel** email: sertele@itu.edu.tr website: web.itu.edu.tr/ sertele
- **Assoc. Prof. Filiz Bektaş Balçık** email: bektasfi@itu.edu.tr
- **Prof.Dr. Esra Erten** email: eerten@itu.edu.tr website: https://avesis.itu.edu.tr/eerten