

GÖKSU TURAÇ

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Education

Eskisehir Technical University

Master's Degree in Computer Engineering

Sep. 2024 – Current

Eskisehir, Turkey

Eskisehir Technical University

Minor in Artificial Intelligence and Machine Learning

Feb. 2021 – Jan 2024

Eskisehir, Turkey

Eskisehir Technical University

Bachelor of Science in Computer Engineering

Sep. 2019 – Jun 2024

Eskisehir, Turkey

Experience

AI in Healthcare Lab

Research Student, Artificial Intelligence and Machine Learning

Oct 2024 – Current

Eskisehir, Turkey

- In the study on lesion segmentation in COVID-19 CT images, a self-training approach was applied using limited labeled data. Model performance was improved by increasing the reliability of pseudo labels using the Monte Carlo Dropout method.

AI in Healthcare Lab (Thesis Project)

Lab Student, Artificial Intelligence and Machine Learning

Sep 2023 – Jun 2024

Eskisehir, Turkey

- The thesis project was developed here.
- Theoretical and practical experience was gained in machine learning and image analysis.

Visea Innovative Information Technologies

Software Engineer Intern, Computer Vision

Feb 2024 – Apr 2024

Eskisehir, Turkey

- In the projects, image processing techniques were utilized in the projects.
- The VGG16 model within PyTorch was utilized in the Emotion Recognition project.
- Object detection was conducted using YOLOv7 and YOLOv8 algorithms.
- Segmentation was performed using U-Net architecture with ResNet.

Drupart R&D

Software Engineer Intern, Web Development

Jul 2023 – Jul 2023

Istanbul, Turkey

- In the project, the UI/UX design part was done using Figma. The web page, designed in Figma, was coded with adherence to SEO rules and utilizing Bootstrap 5.3.
- Git was employed for source code review, code sharing, branching structure, and version control management.

Technical Skills

Languages: Python, Java, HTML/CSS, SQL

Technologies/Frameworks: Scikit-learn, OpenCV, Tensorflow, Keras, PyTorch, Numpy, Pandas, Matplotlib, Seaborn

Projects

COVID-19 Lesion Segmentation with Self-Training and Monte Carlo Dropout

Research Project

- Designed a self-training pipeline for segmenting COVID-19 lesions in chest CT images using the teacher-student model, a semi-supervised learning approach with limited labeled data.
- The teacher model generated pseudo-labels for unlabeled images. Applied Monte Carlo Dropout to estimate uncertainty and filter out low-confidence pseudo-labels, improving their reliability.
- Accepted to present the study at SIU 2025 (IEEE Signal Processing and Communications Applications Conference).
- Libraries Used: Tensorflow | Keras | OpenCV | Pandas | NumPy | Sklearn | Matplotlib | Seaborn

Eye Disease Detection, Severity Prediction, Localization with Focal Loss and Grad-CAM

Thesis Project

- The system has three main components: (i) The eye disease prediction model is trained with a dataset containing fundus images with six different diseases. (ii) The diabetic retinopathy severity prediction model is trained with fundus images obtained from patients with diabetic retinopathy labeled with the stage of the disease. (iii) The system locates the regions related to eye diseases using the Grad-CAM.
- The project has been selected as the winner among 31 groups at the 17th Project Fair and Competition held at Eskisehir Technical University on May 28, 2024.
- This research is presented at Engineering Sciences and Research Student Congress, Ankara, Atılım University, 2024.
- Models Used: MobileNet | ResNet50 | InceptionV3 | VGG16
- Libraries Used: Tensorflow | Keras | PIL | os | OpenCV | Pandas | NumPy | Sklearn | Matplotlib | Seaborn | Gradio

Analysis Customer Loss | Python, Jupyter Notebook

Project Link

- Accuracy Score: 81.2 | Project to determine the handwritten number in the dataset on Kaggle.
- Libraries Used: Pandas | NumPy | Sklearn | Matplotlib | Seaborn | Tensorflow

Data Science / Reference

ASST. PROF. DR. SEMA CANDEMİR

AI in Healthcare Lab

Eskisehir Technical University

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