

# EREN CETIN

MSc Student at ETH Zurich  
Excellence Scholar

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## EDUCATION

### ETH Zurich

MSc IN ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY

- Specialization in Machine Learning and Signal Processing
- Awarded with Excellence Scholarship by ETH Foundation
- GPA: 5.76/6.00 (without Thesis)
- Related Coursework: Deep Learning, Machine Perception, Computer Vision, Probabilistic AI, Robot Learning (3D Reconstruction, NIR), Large Language Models

Zurich, Switzerland

09/2022 - present

### Koç University

BSc IN ELECTRICAL & ELECTRONICS ENGINEERING / DOUBLE MAJOR IN ECONOMICS

- Salutatorian of the class of 2022, Top ranked student in both EEE and Economics
- Awarded with full-tuition scholarship and Vehbi Koç Honor Award each semester
- GPA: 4.00/4.00
- Specialization in Digital Image/Video Processing, Machine Learning, Deep Learning, AI

Istanbul, Turkey

09/2017 - 06/2022

## RESEARCH EXPERIENCE

### KUIS AI Lab, Koç University

UNDERGRADUATE RESEARCH ASSISTANT

- Research on image/video compression using recurrent and fully convolutional auto-encoders under supervision of Murat Tekalp. Presented our work on bidirectional video compression in ICIP 2022.
- Python, PyTorch, Slurm

Istanbul, Turkey

02/2021 - 09/2022

### MA-CSSL, Koç University

UNDERGRADUATE RESEARCH ASSISTANT

- Participated in research project, "IMF Decides, Machine Learns" to achieve a high accuracy prediction of IMF decisions. Assisted in building a large dataset of IMF transcripts.
- Python, Office

Istanbul, Turkey

01/2022 - 03/2022

### KUIS AI Lab, Koç University

SUMMER RESEARCH INTERN

- Research and study on style transfer and image manipulation using GANs. Reimplemented the paper "Swapping Autoencoder for Deep Image Manipulation" by Park et al. (2020).
- Python, PyTorch, Slurm

Istanbul, Turkey

06/2021 - 09/2021

## PROFESSIONAL EXPERIENCE

### Visium SA

JUNIOR MACHINE LEARNING ENGINEER

- Developed a document storage and retrieval system based on Retrieval-Augmented Generation for a client. Scoped and maturized a production pipeline optimization project.
- Python, PyTorch, Project Scoping, Collaboration, Use-case Development

Zurich, Switzerland

08/2023 - 02/2024

### ART Labs

COMPUTER VISION INTERN

- Designed a 3D garment texture optimizer using multiple still images and 3D model.
- Python, PyTorch, OpenCV

Istanbul, Turkey

07/2021 - 09/2021

### Softtech

NATURAL LANGUAGE PROCESSING INTERN

- Assisted building a text classification model and preparing a text corpus for a client bank.
- Python, PyTorch

Istanbul, Turkey

06/2021 - 07/2021



## ABOUT ME

Focus on neural rendering and 3D reconstruction with and interest in generative models and data compression.

## SKILLS

Python

PyTorch

MATLAB

C/C++

CUDA Programming

## LANGUAGES

English • Fluent (TOEFL iBT 115/120)

German • Beginner

Turkish • Native

## PROJECT TOPICS

- Generalizable 3D reconstruction using MVS and Gaussian splatting
- 3D Gaussian splatting representation compression
- Sparse neural 3D reconstruction
- Neural video/image compression
- DNA sequencing using transformers
- Course projects on optical flow estimation, image enhancement, deblurring and various CV problems

## PUBLICATIONS

- E. Cetin, M.A. Yilmaz, A.M. Tekalp. "Flexible-Rate Learned Hierarchical Bi-Directional Video Compression With Motion Refinement and Frame-Level Bit Allocation," in International Conference on Image Processing, Bordeaux, France, 2022.

## TEACHING EXPERIENCE

### ETH Zurich

*Zurich, Switzerland*

STUDENT TEACHING ASSISTANT FOR MACHINE PERCEPTION LECTURES

*02/2024 - 06/2024*

- Prepared and presented tutorials for 417 students in the Machine Perception course. The course involves a wide-range of Computer Vision applications and is offered to a diverse group of students at ETH Zurich
- PyTorch, Deep Learning, Tutoring, Presentation, Public Speaking

### Koç University

*Istanbul, Turkey*

TEACHING ASSISTANT IN ECON 333, GAME THEORY

*09/2020 - 01/2021*

- Teaching assistant for the "Game Theory & Strategy" lectures. I conducted problem sessions for over 80 students weekly and arranged office hours.

EDUCATIONAL TUTOR IN ELEC 100, INTRO TO EEE

*02/2019 - 06/2019*

- Tutoring over 90 freshman students in the "Introduction to EEE" lectures for a support program provided by Koç University.