

Omer Sabri Emeksiz

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EDUCATION

Koç University

Master of Science in Computer Science and Engineering

GPA: 3.88/4.00

Istanbul, Turkey

October 2024 – June 2026 (Expected)

Marmara University

Bachelor of Science in Electrical Electronic Engineering - Honor

GPA: 3.33/4.00

Istanbul, Turkey

September 2021 – June 2024

PUBLICATIONS

Ö. S. Emeksiz, E. Maşazade, S. Selim, “[AI-Driven Optimization of the Filling Process: A Comparison of Reinforcement Learning Methods](#)”, IEEE 33rd Signal Processing and Communications Applications Conference (SIU), 2025

Ö. S. Emeksiz, E. Erzin, Y. Yemez, T. M. Sezgin, “[A Convolutional Transformer Model for EEG-Driven Cybersickness Detection in VR Experience](#)”, IEEE 33rd Signal Processing and Communications Applications Conference (SIU), 2025

Ö. S. Emeksiz, M. E. Ağcabay, E. Maşazade, S. Selim, T. Boysan, “[A Reinforcement Learning Model for Industrial Filling Process Control](#)”, IEEE 30th International Conference on Electronics, Circuits and Systems (ICECS), 2023

WORK EXPERIENCE



KUIS AI Center, Koç University

AI Researcher

Istanbul, Turkey

October 2024 – Present

- Conducting research on EEG-based brain-computer interfaces, deep learning, and computer vision to enable real-time prediction and mitigate cybersickness in VR, under the supervision of [Prof. Metin Sezgin](#), [Prof. Yücel Yemez](#), and [Prof. Engin Erzin](#); active member of the [IUI Lab](#) and [MVGL Lab](#).



Baykon Industrial Weighing Systems

Embedded Machine Learning Engineer

Istanbul, Turkey

February 2024 - October 2024

- Development of a Reinforcement Learning-based embedded industrial filling system ([TUBITAK-1501](#)).



TUBITAK

Engineer Intern

Istanbul, Turkey

August 2023 - September 2023

- Developed continuous time TCP/IP communication application using C# and data extraction tool using Python.



Open Business Software Solutions (OBSS)

Software Engineer Intern

Istanbul, Turkey

July 2023 - August 2023

- Developed an full-stack enterprise level [Human Resources Job Postings and Applications Management System](#) web application by using Java, Spring Boot for backend and ReactJS, MUI for frontend.
- Used LDAP and LinkedIn API with Spring Security and JWT for authentication and authorization.
- Managed project with Apache Maven and utilized Hibernate, Spring Data JPA and MySQL for database.



Marmara University

Undergraduate Research Assistant (Machine Learning/Artificial Intelligence)

Istanbul, Turkey

December 2022 - June 2024

- Researched Machine Learning/Artificial Intelligence under [Prof. Engin Maşazade](#). Developed a Reinforcement Learning-based industrial filling system ([TUBITAK-1501](#)) for [BAYKON INC.](#).



Kalem Software

Software Engineer Intern

Istanbul, Turkey

August 2022 - September 2022

- Developed backend for two B2B client web apps: [File Organizer](#) for comprehensive file storage and management, and [Material Waybill Organizer](#) for efficient materials organization by using Java and Spring/Spring Boot.
- Managed project with Apache Maven and utilized Hibernate, Spring Data JPA and MySQL for database.

TEACHING EXPERIENCE



Koç University – *Graduate Teaching Assistant*

Istanbul, Turkey

COMP100 – Introduction to Computer Science and Programming

September 2024 – June 2025

- Facilitated weekly lab sessions and office hours over two semesters (Fall 2024 & Spring 2025), preparing and grading assignments and exams for 200+ students.



Marmara University – *Undergraduate Teaching Assistant*

Istanbul, Turkey

EE3082 - Communication Engineering Laboratory

February 2024 – June 2024

- Assisted [Prof. Engin Maşazade](#) in coordinating and evaluating lab activities for 100+ junior-year students, providing guidance and assessment.

EXTRACURRICULAR ACTIVITIES



Marmara ACM Student Chapter

Istanbul, Turkey

Founder/President/Instructor

July 2023 - June 2024

- Led a team of 30+ to deliver technical training for 500+ computer science enthusiasts, increasing membership to 100+, and lectured 200+ applicants at [Marmara ACM](#) on algorithms and data structures.



inzva - Turkish Hacker Society

Istanbul, Turkey

Participant of Inzva Algorithm Program

February 2022 – April 2022

- Completed a two-month algorithm program focused on graphs, data structures, and dynamic programming.

PROJECTS

[rl-filling-control](#) | *RL, Industrial IoT, Process Control, Embedded Systems, Python*

December 2022 – Present

- Developed and deployed RL-based optimization on a physical industrial filling system, combining MC, TD, and Q-learning modeling, offline validation, and on-device integration with control, protocol, and database systems.

[cs-conformer](#) | *Convolutional-Transformer, Signal Processing, PyTorch*

January 2025 – March 2025

- Developed a Conformer-based deep learning pipeline for detection of VR-induced cybersickness from EEG signals.

[Learning-to-Smile](#) | *RL, SAC, Affective Computing, Human-Robot Interaction, PyTorch*

March 2025 – Present

- Developed a Reinforcement Learning framework using the Soft Actor-Critic (SAC) algorithm to train a Furhat robot for generating facial expressions guided by real-time emotion classification.

RELEVANT COURSEWORK

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|--|---|---|
| • Computer Vision | • AI in Health Sciences | • Probability |
| • Deep Learning | • Image Processing | • Signals and Systems |
| • Medical Image Analysis | • Digital Signal Processing | • Object-Oriented Programming |
| • Embodied Intelligence | • Intro. to Machine Learning | • Digital Communication |

SKILLS

Programming Languages: Python, C, C++, Java

Libraries and Frameworks: PyTorch, NumPy, Scikit-learn, Matplotlib, OpenCV, Spring Boot, ReactJS