

Omer Sabri Emeksiz

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EDUCATION

Koç University

Master of Science in Computer Science and Engineering

GPA: 3.85/4.00

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 , 33rd Signal Processing and Communications Applications Conference (SIU), 2025 (to appear)

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

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 Mağazade](#) 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