

Aybars Yazici

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Gender: Male Date of birth: 10/10/1998 Nationality: Turkish

ABOUT ME

For a more interactive way to learn about me, please check my portfolio website.

PROJECTS

[09/2024 – 01/2025]

Peace Mediator Assistant

Thesis done at the [LSIR lab at EPFL](#).

Develop a tool that leverages the capabilities of Large Language Models (LLMs) to extract, analyze, and summarize important information from news articles. It focuses on identifying the main political issues, the stakeholders involved in these conflicts, and their respective positions, sentiments, emotions, and stances. The primary purpose is to assist mediators in conflict analysis and the settlement of disputes by providing them with detailed insights derived from news sources.

[09/2024 – Current]

Explanations in Example-based Learning

How can we best support learners in self-explaining in example-based learning?

A large scale, real class room 2x2 study design with over 200 participants.

RQ1: What is the effect of self-explaining the elements of a text in example-based learning?

RQ2: What is the effect of actively highlighting the elements of a text in example-based learning?

Link: <https://aybarsyazici.github.io/explanation-eval/>

[09/2023 – 01/2024]

Investigating the Effectiveness of AI-Generated Examples for Learning

Publication at CHI 2024.

Research Project at [ML for Education Lab. at EPFL](#). The project aims to investigate the potential of LLM for personalizing educational content. Research question(s): (1) Can we use LLM to generate domain and user specific examples and explanations/advice? (2) How do these examples compare to peer/expert generated examples? (3) Is it possible for LLM to learn what the common mistakes and patterns for a specific domain are?

Link: <https://dl.acm.org/doi/10.1145/3613905.3650900>

[10/2022 – 01/2023]

Brain Fingerprinting and Task Decoding via Graph Structure Learning

A project that aims to investigate the use of graph structure learning (GSL) methods to construct alternative graphs to so called functional connectivity (FC) graphs where a brain graph is derived based on pairwise functional correlation between activity in brain regions. Conducted as a course project for ML course at EPFL under the supervision of Medical Image processing Lab.

Link: <https://drive.google.com/file/d/1sqEazi1b93ltYfkUFU4iQcDDFkNtxzZX/view?usp=sharing>

[09/2023 – 12/2023]

Information systems course projects

Group course projects conducted at EPFL for the [Distributed Information Systems course](#).

Of the 3 projects(each one taking 4 weeks), our group achieved #1 ranking for 2 and #2 ranking for one of them.

Here are the topics of the 3 projects:

Project 1: Text Retrieval & top-k re-ranking

Project 2: Recommender systems | Students are expected to develop a recommender system that is able to predict the rating of a user for a given movie.

Project 3: Named Entity Disambiguation | Named Entity Disambiguation (NED) is the task of mapping entities, such as persons, locations, or companies, from a given text document to corresponding unique entities in a target Knowledge Base (KB).

The google drive link contains our report for all 3 projects

Link: https://drive.google.com/file/d/1NCrKXT1pjPFRcj7uT_xZeKkoQaL_oatr/view?usp=sharing

[02/2023 – 06/2023] **Time series student performance prediction**

I along with 2 other team members, worked with data provided by a start up (lernnavi), to come up with, train and test several machine learning algorithms to draw insights from the raw data. Such as: cluster students using the platform into groups and try to predict their performances of week N, using the data available from weeks 1...N-1

Link: <https://github.com/ML4BD/final-submission-uclumasa>

[03/2023 – 06/2023] **Satellite Visualizer**

A website that visualizes the satellites orbiting the Earth, done as a project for [Data Visualization course at EPFL](#).

Link: <https://com-480-data-visualization.github.io/project-2023-astro-vizards/>

[09/2021 – 01/2022] **Digital Game Library Database Application**

Developed a game library database application utilizing ReactJS, along with express for setting up endpoints for the frontend application. Utilized ER Model for designing, concepts of 3rd Normal form for refining and MySQL for implementing the database.

Link: <https://github.com/aybarsyazici/CS306-Project>

[02/2021 – 08/2021] **Writing & Testing iXRD on-board software & the interface software**

Aim: To write the codes to operate iXRD in orbit with the MSP 430 microprocessor on board. To conduct tests with an interface software running on PC written in C#. (Program for undergraduate research Sabanci Uni.)

Link: https://docs.google.com/document/d/1IvoBjzJpm4n5pZDJBBvGrlo8rhvJV2eyQU_7OKH1pjc/edit?usp=sharing

[09/2020 – 06/2021] **Image segmentation for graphical user interfaces**

Graduation project:

Develop an image segmentation approach for partitioning the digital images of screens into multiple segments, each of which represents a GUI object, with the goal of automating the process of interface verification of smart TVs.

WORK EXPERIENCE

[02/2024 – 08/2024] **Machine Learning Engineer**

Visium

City: Lausanne | **Country:** Switzerland

Worked as a Junior ML Engineer to create AI models to suit client needs.

Some implemented/worked on concepts:

- Implicit Deep Learning Recommender systems
- Document line item OCR + classification
- Retrieval Augmented Generation

Utilized PyTorch, DVC, Docker along with Google Cloud(Cloud run apps, Firestore DB) for the backend of the ML pipeline and Firebase, ReactJS for the frontend.

[09/2023 – 01/2025] **Graduate teaching assistant**

EPFL

Country: Switzerland

Worked as a graduate level teaching assistant(Assistant étudiant) for Machine Learning([CS-433](#)) [09/2023-01/2024] and TCP/IP([COM-407](#))[09/2024-01/2025] course at EPFL.

- Prepared weekly exercises.
- Organized and graded projects.
- Helped students during exercise sessions

[09/2020 – 11/2022] **Web developer**

Spiky AI

Used several frontend and backend frameworks to design and develop admin panels, product websites. (VueJS, NuxtJS, ReactJS, Django Python, Spring Boot Java)

[12/2021 – 06/2022] **Software Developer**

Evet Tech

Country: Türkiye

Worked primarily as a .NET Developer. Utilized ASP.NET framework along with MVC structure to:

1. develop new web pages using JQuery and razor web pages in older projects. And ReactJS in newer projects.
2. create, maintain and consume azure functions and deploy new functions apps to the Microsoft Azure portal
3. monitored, debugged and optimized an already existing large .NET codebase and MS SQL DB.

[06/2021 – 11/2021] **Web developer**

Vaysis

Country: Türkiye

Used spring boot Java for the backend and ReactJS with TypeScript for the frontend to develop dashboards, landing pages and commercial websites. Utilized Nx Project structure.

[09/2018 – 06/2020] **University teaching assistant**

Sabanci University

Country: Türkiye

Worked as an Undergraduate level teaching assistant for many courses throughout my education:

Undergraduate Level Teaching Assistant for Data Structures Course(CS 300)[09.2019 - 06.2020]

- Prepared and graded homework.
- Held office hours, recitations, conducted review and discussion sessions weekly to help students with concepts they were struggling with.

Undergraduate Level Teaching Assistant for Circuits II Course(EE 202) [01.2020 - 06.2020]

- Worked as a supervisor in lab hours to help students implement topics learned in lectures.
- Graded and prepared lab assignments and homework.
- Held office hours and discussion sessions to help students with assignments.

Undergraduate Level Teaching Assistant for Calculus II Course [09.2018 - 01.2019]

- Held recitations to solve example questions and re-explain topics went over in the lectures.
- Graded homework and quizzes.
- Proctored exams.

[06/2020 – 09/2020] **Software developer**

PI Works

Country: Türkiye

Summer Internship,

- Worked on projects involving both the telecommunications layer and software layer.
- Focused on database management, audio streaming, evaluating wireless network performance, and identifying ways to improve upon it.
- Gained insight into the common issues faced by telecommunication systems and their solutions.

EDUCATION AND TRAINING

[09/2022 – Current]

MSc in Computer Science

EPFL <https://www.epfl.ch/en/>

Address: Rte Cantonale, , 1015 , Lausanne, Switzerland | | **Final grade:** CGPA 5.64/6.0

[17/09/2017 – 04/2022]

Computer Engineer & Electronics Engineer Double major

Sabanci University <https://www.sabanciuniv.edu/en>

Address: Orta, Üniversite Cd., Tuzla/İstanbul, 34956, İstanbul, Türkiye | | **Final grade:** 3.84/4.00

LANGUAGE SKILLS

Mother tongue(s): Turkish

Other language(s):

English

LISTENING C2 READING C2 WRITING C2

SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2

French

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

HONOURS AND AWARDS

[12/2017]

High honor certificate Awarding institution: Sabanci University

High honor certificate awarded for academic success during a semester in Sabanci University.

Received one of these in each of the following semesters:

12/2017 - 06/2018 - 12/2018 - 06/2019 - 12/2019 - 06/2020 - 01/2022