

# Fatih Erdoğan

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## Education

### University of Oxford, Oxford/United Kingdom

Oct 2025 – Oct 2026 (exp.)

MSc. in Advanced Computer Science

GPA: -

### Koç University, Istanbul/Turkey

Sep 2020 – Jan 2025

B.S. in Computer Science and Engineering (English)

Full merit scholarship

Cumulative GPA: 3.99/4.00, Major GPA: 3.99/4.00

Graduated 2<sup>nd</sup> in Department

### Galatasaray High School, Istanbul/Turkey

Sep 2015 – Jun 2020

Galatasaray is the most prestigious high school in Turkey founded in 1481. Being a francophone school, primary medium of instruction is French and secondary is English.

GPA: 97.39/100

### Highly Gifted Students Education Program, Eskisehir/Turkey

Sep 2012 – Sep 2015

UYEP is a program providing high level education to secondary school students, accepting students with an exam measuring creative thinking and mathematical skills.

## Work Experience

### Koç University, Istanbul/Turkey

Jun 2024 – Present

Undergraduate AI Researcher

- Focused on the development of vectorized High-Definition (HD) maps.
- Working on enhancing the current state-of-the-art performance, focusing on improving inference time and metric performance.
- Conducting in-depth research on mapping techniques, aiming to contribute novel approaches to autonomous driving.
- Published paper: [Mapping like a Skeptic: Probabilistic BEV Projection for Online HD Mapping](#)

### Baykar Technologies, Istanbul/Turkey

Aug 2023 – Oct 2023

Artificial Intelligence and Software Developer Intern

- Investigated the evolution of vision models on various tasks.
- Generated synthetic data.
- Integrated a SOTA model to a real-time scenario (faster inference).
- Implemented custom evaluation metrics.

- Included in project management tasks related to the deployment of RPA (Robotic Process Automation) robot in the company.
- Extracted data from web sources, stored and managed it within an SQL database, and conducted fundamental analysis tasks, including data visualization and reporting.

## Academic Projects

### Python

- **BEV2BEV Prediction with VQ-Transformer:** Focused on ego-centered road layout prediction using action and frame-conditioned generative modeling (VQVAE-Transformer), leveraging CARLA simulation data to explore future scene prediction based on past BEV data and vehicle actions.
- **Curriculum Learning Pipeline for a Large Language Model (LLM):** Implementation of a new curriculum learning pipeline for RoBERTa, based on 3 staged gradual incrementation of the number of neurons as well as the vocabulary size.
- **Deep Learning Model for Swing Level Prediction:** Design and implementation of a transformer-based model combined with a new data preprocessing approach, aiming to predict the next swing level in forex market trading pairs.

### Java

- **Text-based adventure game powered by LLM's:** Creation of a dynamic and stateful text-based adventure game application, allowing to fictionize alternate movie endings.
- **Risk Game implementation using design patterns:** With a group of three people that I managed, we implemented a replicate of the Risk Game with agile methodology, effective Git usage, and Java AWT.

### C

- **Linux kernel module and a custom shell implementation,** allowing to use most of the functionalities provided by the bash. Custom implementation of some commands such as alias, hexdump, etc. Implementation of a new Linux kernel module, a character device, building a process tree rooted at a given process id.

### Network and Security

- **Article on Password Based Authentication Systems:** I made research on the existing password-based authentication paradigms, investigated their strengths and downfalls. You can find the article [here](#).
- **Server/Client Application using java.net with Design of an Application Layer Protocol:** The server side accepts connection requests and creates a server thread which responds user's requests appropriately. The communication happens over the TCP with a custom application layer protocol.
- **Simulation with Cisco Packet Tracer:** I created a network simulation for a small company that can support up to 31 branches with a maximum of 126 devices each. The project included appropriate subnetting with gateway, and routing configurations for the end-devices and routers respectively

## Technical Skills and Proficiencies

- Python (PyTorch, NumPy, Pandas, Matplotlib, Django REST)
- Java (Spring Boot, AWT, Junit)
- Deep Learning (Finance, NLP, Computer Vision, Autonomous Driving)
- Network Design and Security
- DevOps Tools (Docker, DockerCompose)
- DBMS (PostgreSQL, MySQL)
- Linux Command Line Interface
- Wireshark and Cisco Packet Tracer
- C / Assembly Language

## Languages

- Turkish (native)
- English (IELTS – C1)
- French (DELFI – B2)

## Publications

- F. Erdogan, M. R. Barin, and F. Guney. "Mapping like a Skeptic: Probabilistic BEV Projection for Online HD Mapping." *Proceedings of the British Machine Vision Conference (BMVC)*, 2025. [link](#)

## Honors, Achievements and Certificates

- Vehbi Koç Honor Certificate (Awarded for outstanding academic performance) (Koç University, 2024)
- IELTS score: 8.0 (2024)
- 144<sup>th</sup> in Turkish University Exam (YKS Mathematics and Science, 2020)
- DELF (Diplôme d'Etudes en Langue Française) B2 certificate (2018)
- 1<sup>st</sup> in Beyoglu County Table Tennis Competition (Beyoglu/Istanbul, 2017)
- 3<sup>rd</sup> in Yeditepe University Debate Competition (Istanbul, 2016)
- 1<sup>st</sup> in the National High School Placement Exam in Turkey (TEOG 2015)

## Extra-Curricular Activities

**Instructor (Turkish):** Participation as instructor to several camps aiming to prepare high school students to Turkish university exam (2020–2023).

**Private Lessons (French):** Co-Founder of Cicero Academy, giving private lessons from science related subjects (Math, Physics, Chemistry, Biology) and providing mentorship to francophone high-school students. (2019–2021)

**Table Tennis:** Chairman of Galatasaray High-School Table Tennis Club, licensed player for 8 years (2013–2021)

**Model United Nations (French):** Co-Chairman of Galatasaray High-School MFNU Club, experience as delegate, chair of committee and chair of general assembly. (2016–2020)

**Debate (Turkish):** Co-Chairman of Galatasaray High School Debate Club, participant of numerous debate competitions. (2015–2017)