

# Emre Biçer

## Software Engineer

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## Experience

**Motius, Software Engineer - Working Student**

Munich, Germany - Feb 2023 - Apr 2025

- Contributed to the development of an API-Gateway project, that elevates low-level APIs (e.g. CAN bus, SomelP) to higher level event-driven APIs (e.g. MQTT, HTTP server-side-events) defined in AsyncAPI and OpenAPI standards. The project is written in Rust and it is for a leading automotive company where our software is already used in hundreds of vehicles. My team was responsible of developing new features, fixing bugs, adding documentation/tests, and maintaining CI/CD jobs.
- Created an automated certificate signing process for another project, which involves multiple parties such as a remote signing server and local yubikey devices for secret management and identity validation. Additionally, a backend and frontend for this certificate signing process were implemented, making it accessible to workers without technical knowledge.

**Logo Yazılım, Software Engineer**

Izmir, Turkey - July 2020 - Aug 2021

- Worked with the LogoHR team, helped maintain and improve web based (on-premise) HR projects that is used by thousands of mid-sized companies. The projects were mainly developed with .NET MVC, .Net Core and jQuery.
- Automated manual processes with Python scripts, simplified the recurring tasks and introduced basic CI/CD.

**AirTies Wireless Networks, Software Engineer Internship**

Izmir, Turkey - July 2019 - Aug 2019

- Introduced a software for access point (AP) devices to perform network traffic analysis with C. Implemented a website to observe the analysis and the live AP state with ease. Worked with the TCP/IP and HTTP protocols to implement a private messaging program. Conducted experiments to maximize data throughput of APs, achieved 30% improvement.

## Education

**Technical University of Munich, Computer Science (M.Sc.)**

Munich, Germany - Oct 2021 - Apr 2025

- I got involved in multiple courses and topics that would focus on distributed systems, cloud computing, and systems programming. My master's thesis focus is on improving the BtrBlocks interoperability with on-demand translation. BtrBlocks is an efficient columnar compression for data lakes, and my work focuses on creating Rust bindings and implementing the BtrBlocks compression into other projects like Apache DataFusion while maintaining feature parity and implementing new features such as running SQL queries on compressed data.

**Dokuz Eylül University, Computer Engineering (B.Sc.)**

Izmir, Turkey - Sep 2016 - Oct 2020

- Torch, Senior Project (Git Repository, Project Report)**
  - Created a rest API that serves several machine learning models for image processing (Python 3, TensorFlow).
  - Trained 4 different open-source CNN and k-NN machine learning models.
  - Implemented a progressive web application for mobile devices.

## Personal Projects

**Mouse, Cross Platform Mouse Library (Git Repository)**

- A library written in Rust that aims to help simulating and listening mouse actions across different platforms.
- Uses system libraries like Win32, CoreGraphics, X11 and uinput to create a single API for major operating systems.

**LockerApp, Password Manager (Website)**

- Encrypts the data and stores the passwords in an online database (firebase). Installed by 100+ people on the Play Store.
- Built with NodeJS and VueJS for web and Flutter for mobile, uses Render and Cloudflare for hosting.

## Technical Skills

**Programming Languages:** Rust, Go (golang), Python, JavaScript, Java, C#, C++

**Interests:** Backend development, systems programming, and developer focused software (APIs, CLIs, software tools...)

**Other:** Jira, Git, SQL, Databases, Linux, Bash Script, HTTP, MQTT, NatsIO, GCP, AWS, Docker, Angular, Agile, Scrum

## Achievements / Awards / Certificates

◎ **TOEFL iBT Test**, Score: 95 / 120, issued by ETS, measures English proficiency (Feb 2021) ◎ **BMO Special Award**, GBYF - Senior Projects / Open Source Software Category (Sep 2020) ◎ **Third Place**, Dokuz Eylul University - Have an Idea / Ideathon (Mar 2019) ◎ **Second Place**, Izmir Institute of Technology - Code of Duty / Game jam (Mar 2018)

## Language Skills

- Turkish (Native language)
- English (Advanced)
- German (B1.1)