Emre Biçer

Software Engineer

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Experience

Motius, *Software Engineer - Working Student*   **Feb 2023 - Apr 2025**

- Contributed to the development of an API-Gateway project, that elevates low-level APIs (e.g. CAN bus, SomeIP) 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 developed for a leading automotive company. I was part of the development team where we developed new features, fixed bugs, introduced unit and integration tests, and maintained CI/CD jobs on GitLab.
- In another project, I implemented an automated certificate signing process, which involves multiple parties such as a remote signing server and local yubikey devices for secret and identity validation. Additionally, I have implemented a backend and frontend for this certificate signing process, making it accessible to workers without technical knowledge.

Logo Yazılım, *Software Engineer*   **July 2020 - Aug 2021**

- Worked with the LogoHR team, helped my team maintain and improve web based HR projects with .NET MVC, .Net Core and jQuery by following the scrum principles, used Jira for issue tracking and git for version control.
- Automated manual CI/CD processes by writing Python scripts and simplified the recurring tasks.

AirTies Wireless Networks, *Software Engineer Internship*   **July 2019 - Aug 2019**

- Developed a software for access point devices to perform network traffic analysis using C and JavaScript. Implemented the access point interface for web browsers. Learned the TCP/IP and HTTP protocols to implement a private messaging program. Conducted experiments to maximize data throughput of APs with Python, achieved 30% improvement.

Education

Technical University of Munich - Computer Science *(M.Sc.)*   **Oct 2021 - Apr 2025**

- During my studies, 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 DataDusion while maintaining feature parity and implementing new features such as running SQL queries on compressed data.

Dokuz Eylül University - Computer Engineering *(B.Sc.)*   **Sep 2016 - Oct 2020**

- **Torch - Senior Project** (GitHub - Report)
  - Created an API that serves several machine learning models for image processing (Python 3, TensorFlow).
  - Trained CNN and k-NN machine learning models, implemented 4 different open-source models to the API.
  - Implemented an example progressive web application for mobile systems (jQuery).

Personal Projects

Mouce - Cross Platform Mouse Library (GitHub)

- Mouce is 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 (Play Store - Web)

- Encrypts the data and stores the passwords in an online database (firebase). Installed by 100+ people on the Play Store.
- Built with NodeJS/ 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++

Technical Interests: Backend development, developer focused software (APIs, CLIs, software tools…)

Other: Jira, Git, SQL, Databases, Linux, Bash Script, HTTP, MQTT, NatsIO, GCP, AWS

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 -** İzmir Institute of Technology - Code of Duty / Game jam (Mar 2018)

Language Skills

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