

# Berkay Dinç

İzmir, Turkey [+90 543 589 57 98](tel:+905435895798) [berkaydinc@gmail.com](mailto:berkaydinc@gmail.com) [github](#) [linkedin](#)

## Profile

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I am a junior computer engineering student at Dokuz Eylül University. I have been involved with software and computers since about high school, mostly as a hobby and volunteer. I am interested mostly in systems programming and I enjoy being close to the metal. I have a strong aptitude for adapting complex systems and abstract concepts. I like reliable, fast, and elegant solutions to computing problems, but I know when to not make them a liability to delivering results.

## Education

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**BSc in Computer Engineering (GPA: 3.86 / 4)** — Dokuz Eylül University — 2020 - present

## Experience

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**Intern** — BMC Automotive — July 2023

- Learned the important aspects of the **SAP ERP** ecosystem in a practical manner.
- Gained hands-on experience with **SQL** and **SAP HANA database**.
- Delivered solutions to the internal customer using **ABAP** for real-world business problems.

**Freelancer** — Fiverr — 2022 - present

- Delivered solutions to undergraduate students programming problems.
- Implemented number of different projects mainly in **C** and in **Java**, **C#**, **Python** too.
- Mentored undergraduate students to improve their programming in an advisory manner.

## Volunteer Experience

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**Ground Control System Team Lead** — Dokuz Eylül Aerial Vehicles (DEHA) — September 2023 - present

- Developed *Nightingale*, an async **MAVLink** protocol implementation written in **Rust**.
- Led the development of *Eyrie*, a custom **GCS** for DEHA drones, built on top of *Nightingale*, written in **Rust**.
- Flew DEHA drones with manual control and pre-planned missions in *Eyrie* and *Nightingale*.

**Rust Instructor** — Dokuz Eylül Aerial Vehicles (DEHA) — September 2023 - present

- Gave introductory lectures on Rust to members of DEHA and students from various engineering departments.
- Followed and based the lectures on the official book “The Rust Programming Language”.
- Emphasized the importance of tooling, community, ergonomics and the unique features of the language.

**Autopilot Team Member** — Dokuz Eylül Aerial Vehicles (DEHA) — September 2022 - June 2023

- Documented the architecture of prominent autopilot firmware, referring their source code (e.g ArduPilot)
- Implemented drone missions on simulations with raw **MAVLink** packets in **Python**.
- Guided team members through developing embedded applications in **Rust** programming language.

## Interests

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Operating systems, embedded systems, distributed systems, concurrency & parallelism, software optimization, high-performance computing, computer networks, machine learning, systems programming.

## Toy Projects

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- [num](#): A **concurrent** turn-based game server, written in **Rust**
- [turko](#): A fast, **parallel** port of Deniz Yuret’s **turkish deasciifier**, written in **Rust**.
- [ray-tracer](#): 3D **multi-threaded ray tracer** written in both **C** and **Rust**.
- [maske](#): A **template meta-programmed** library for enumerating bitmask permutations **C++**.
- [diskord](#): An **API wrapper** for **Discord’s REST API**, written in **Rust**
- [mnist](#): A **neural network** for **character recognition**, trained with **SGD** algorithm, written in **Python**.
- [hoparlor](#): A pair of **WebRTC** clients for broadcasting desktop audio over LAN, written in **Javascript**
- [mano](#): An interactive **simulator** for **mano architecture** written in **Typescript**.
- [tt](#): A translation addon that crawls Tureng, written in **Javascript**