

# Ege Bilecen

## Mechatronics Engineer

Dublin, Ireland

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I specialize in software development as a mechatronics engineer. I have done a variety of work in various fields, such as desktop programming, embedded programming, web development, and mobile development, using various programming languages. Because of this, I am quite quick to adapt to new projects and new programming languages.

### EDUCATION

#### MEng in Electronic and Computer Engineering (IoT Major)

2023 – 2024

Master's Degree, Dublin City University

Dublin, Ireland

**Grade:** 1st Class Honours

**Master's Project:** Rust in the Linux Kernel

##### Modules:

- Data Analysis and Machine Learning
- Real-Time Digital Signal Processing
- Wireless/Mobile Communications
- OOP with Embedded Systems
- Connected Embedded Systems
- Network Stack Implementation
- Security for IoT and Edge Networks
- Web Application Development

#### Mechatronics Engineering

2017 – 2022

Bachelor's Degree, Erciyes University

Kayseri, Turkey

**GPA:** 3.13 / 4.00

### SKILLS

- |        |          |                   |
|--------|----------|-------------------|
| • C    | • Python | • Javascript      |
| • C++  | • Rust   | • HTML / CSS      |
| • C#   | • Lua    | • PLC Programming |
| • Java | • PHP    |                   |

### KNOWLEDGE

- |                        |                    |                         |
|------------------------|--------------------|-------------------------|
| • Embedded Programming | • NodeJS           | • Chrome Extension Dev. |
| • Socket Programming   | • ReactJS          | • Webview Apps          |
| • Image Processing     | • Xamarin          | • Windows Forms Apps    |
| • Cryptography         | • Tauri            | • Dear ImGui            |
| • Linux                | • ROS              | • Qt                    |
| • Linux Kernel Dev.    | • Selenium         | • Git                   |
| • MySQL                | • Spring Framework |                         |

### PROFESSIONAL EXPERIENCE

#### bionluk

Freelance Software Developer

Oct 2018 – Oct 2022

Turkey

- Software development in C++, C#, Python, PHP, and Javascript based on customer requests.
- Desktop GUI application development in Qt and Windows Forms.
- Website development using HTML/CSS, Javascript and PHP.
- Completed more than **70** commissions.

## LANGUAGES

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- **Turkish:** Native
- **English:** Professional Proficiency

## PROJECTS & INDIVIDUAL WORK

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### Linux Kernel Development

- Misc. character device implementation in C and Rust.
- Kernel customization and compilation.

### Home Automation with Mesh Network

- System design of the mesh network.
- Design of the communication infrastructure between nodes, server, and user.
- User application UI design and software development using Xamarin.
- Embedded programming of microchips to communicate with sensors in C++.

### Unmanned Aerial Vehicle (Drone)

**Mar 2021 – Sep 2021**

Turkey

- Electrical system design of the UAV.
- Calculations to select appropriate parts of the UAV, such as batteries, propellers, and motors, based on requirements.

*I worked on this project when I attended the TUBITAK International Unmanned Aerial Vehicle Competition 2021.*

### Unmanned Aerial Vehicle (Drone) & Model Satellite

**Nov 2019 – Sep 2020**

Turkey

- Wrapping the MAVLink protocol implementation in Python.
- Autonomous movement implementation of the UAV using the MAVLink protocol in Python.
- I2C and SPI sensor implementations in Python.

*I worked on this project when I attended the TUBITAK International Unmanned Aerial Vehicle Competition 2020 and the TUBITAK Model Satellite Competition 2020.*

### Unmanned Ground Vehicle

**Feb 2019 – May 2020**

Turkey

- Telemetry implementation of the UGV in C#.
- Camera data transmission implementation of the UGV in C#.
- Image processing for tracking via detecting entities such as humans, objects, etc. in Python.

My projects and work are **not** limited to these. More can be found in my [portfolio](#) and on [GitHub](#).

## REFERENCES

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### Burak Gorbil

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