

Buğra Eren Yılmaz

+905305813177 | bugraeyilmaz@gmail.com | [linkedin](#) | [website](#) | [github](#)

EDUCATION

Gebze Technical University

Bachelor of Science in Computer Engineering **GPA: 3.36/4.00** transcript

Kocaeli, Turkey

Sept. 2018 – June 2022

SKILLS

Interested in Embedded Systems, Linux, OS Dev and FPGA Digital Design. I have **experience** on following skills:

Computer Science: Object Oriented Programming, Data Structures, Algorithms, Functional Programming, Computer Architecture, Operating Systems, POSIX, Concurrent Programming, Machine Learning, Computer Vision

Systems: C, C++, CMake, Linux, Verilog, MIPS - X86 Assembly, FPGA, OpenSSL, QT

Fullstack Apps: Flutter, Native Android, Typescript, Angular

Backend: C#, .net, SQL, Docker, Redis, Nginx, AWS, RabbitMQ

Other: git (gerrit, github), bash scripting, LaTeX, Travis CI

EXPERIENCE

Game Developer Intern @ Taleworlds Entertainment

June 2021 – July 2021

Taleworlds

- Worked on the PC game **Mount and Blade 2: Bannerlord** as a devops and gameplay developer.
- Improved and worked on **Modding Support** and **Modding API** of the game.
- Found, reported and fixed various bugs in **Modding API**
- Engaged with the community of the game and released a game mod to **Nexus Mods** that tests the limits of the modding api of the game. You can find the mod Taletris here.

Embedded Engineer Intern @ Airties Wireless Solutions

August 2021 – September 2021

Airties

- Worked on Linux projects where I mainly developed C projects on Linux embedded devices with different CPU architectures (ARM, MIPS, X86_64).
- Developed an in-memory keystore project for Linux devices. Keystore, stores asymmetric cryptographic keys for future usage. It supports retrieving and saving those keys and signing and verifying with those keys. It also supports a custom **HSM (hardware security module) chipset** used in company.
- Made this keystore module available as an **OpenSSL** custom engine.
- Made optimizations for C programs on Linux, using different instructions sets for different CPU Architectures such as **MIPS**, **ARM64** and **x86_64** architectures.
- Created a custom **memory manager** for **user-space** applications on Linux. This memory manager can manage a given **shared memory segment**. This way different processes can use standard methods such as **malloc** and **free** on **shared memory segments**.

Full-stack Developer Intern @ LOGO Software

February 2022 – March 2022

LOGO Software

- Worked on LOGO Mind Navigator product as Fullstack Developer.
- Developed Backend systems using C# .NET6. Used practical patterns such as Mediator, CQRS and all.
- Developed Frontend systems using .NET Blazor. Worked on porting **webcomponents** to Blazor projects.

Mobile Developer

April 2020 – December 2020

Larsca

- I worked as a mobile developer for contracts. I was responsible for ios and android mobile development.
- Developed mobile application called Experience Ambassadors for Turkish Airlines using Flutter. Deployed to App Store
- Developed a mobile application called The Drink using Flutter. Deployed to App Store and Google Play Store
- Developed necessary admin panels and landing pages using web front-end technologies, Typescript and Angular.

PROJECTS

xml-raytracer | *C++17, CMake, Vcpkg*

May 2022

- Multithreaded C++ recursive raytracer that can render complex meshes with lighting, reflection and shadow support.
- Can render scenes with complex objects and lighting in them, given as XML files.
- Developed a special XML format for representing 3D scenes.
- Multithreading implemented with C++11 future api. It utilizes all of the hardware threads on the computer. Used modern C++ idioms such as move semantics and rule of zero.
- Build process developed using CMake and Vcpkg.
- Resulting demos are available on github. Complete feature list is also on github page.

verilog-atpg | *FPGA, Verilog, C++, QT, ATPG*

June 2021

- Generate ATPG for fault detection on Verilog circuits.
- This tool takes a Structural Verilog source code as an input and applies ATPG algorithms to that circuit. Algorithm results will generate input and output signal patterns that will test the resulting circuit for manufacturing defects.
- Demo video is available on github. Complete feature list is also on github page.

32 bit MIPS CPU | *Verilog, FPGA*

December 2020

- Designed and Created a 32 bit CPU with MIPS architecture.
- CPU supports MIPS instruction set and some more instructions which are newly added by me.
- Developed with Verilog using Quartus.

libvector | *C*

March 2018

- Developed a C library for creating and manipulating vector graphics.
- Library can import/export from/to EPS or SVG formats.
- libvector library has 0 dependencies.

Experience Ambassadors | *Dart, Flutter, SQLite, Python, Flask*

February 2021

- Developed a mobile application for client and deployed to App Store using Flutter.
- Offline first application design with synchronization logic.

The Drink | *Dart, Flutter, Google Maps, Python, Flask*

June 2020

- Developed a mobile application for both ios and android platforms using Flutter.
- User driven marker system for the app using Google Maps, Auto Localization features and otp authentication.

FluAI Backend | *C# .net core, Entity Framework, Postgresql, Docker, AWS ec2 rds lambda*

February 2020

- Developed backend services for mobile application FluAI, using .net stack.
- Deployed the api using AWS ec2 and rds.
- Deployed a neural network model as serverless using AWS lambda.

N-Puzzle App | *Native Android, Java, Neural Networks, Tensorflow, TFLite*

February 2019

- Developed a sliding puzzle game for Android using Java.
- Created and Trained a LSTM model for solving the puzzle using TensorFlow and TFLite.