



Taha Mert Gökdemir

Software Engineer (C/C++)

Email: taha.m.gokdemir@gmail.com | **Phone:** +90-554-747-6997

Location: İstanbul, Turkey | **GitHub:** tahameg | **LinkedIn:** /in/taha-mert-gokdemir/

About Me:

I am an experienced Software Engineer with a strong focus on C/C++ and Real-time Simulations. I excel in developing high-performance applications, optimizing systems, and handling real-time communications. I also have a solid background in simulations and graphics APIs, and I'm skilled in application programming and real time simulation development

Experience

Software Engineer

Born Immersive | June 2023 – Present | London, UK

As a Senior Software Engineer, I specialize in C/C++ development for high-performance simulation applications and backend services.

- **Graphics API Development**
 - Developed industrial graphical applications using **Vulkan** and **OpenGL** on **Linux** for real-time training and simulation systems.
- **C++ SDK & Networking**
 - Designed and implemented core simulation modules in **C++**, including cross-platform support for Linux-based systems using **POSIX** APIs.
 - Implemented low-level **UDP/TCP socket communication** for multiplayer simulation environments, ensuring real-time performance.
- **Project Leadership**
 - Led the Bottling Machine Lockout Procedure Simulation project, utilizing **C++** for logic and **socket programming** to manage synchronized multi-user sessions.

Tech Stack: C++, C#, OpenGL, Vulkan, POSIX, Sockets, Parallel Programming

Software Engineer

Havelsan | February 2022 – June 2023 | İstanbul, Turkey

Worked in the Advanced Technologies Department with a focus on C/C++ development for real-time simulation systems.

- **Simulation Development**
 - Developed core simulation systems using **C++** and **C#**.
- **Networked Real-Time Simulations**

- Designed and implemented a scalable network layer using **C++** and **TCP/UDP sockets** for a multi-user military simulation environment interoperable between GNU and Windows.

Tech Stack: C, C++, C#, Sockets (TCP/UDP), Parallel Programming

Software Engineer

C Tech Information Technologies Industry and Trade Inc. | April 2021 – February 2022 | İstanbul, Turkey

Focused on data transmission and visualization solutions for military-grade communication systems.

- **C++ Simulation Framework Development**
- Built a development GUI using QT Framework and C++ for military-grade communication systems.
- Built a consumer GUI using web front end technologies such as vue and implemented the necessary data-distribution pipeline on rtos system that proxies data from memory to rabbitMQ to http (using lighthttpd c++ library).
- Built some modules for monitoring the communication quality using python.
- **System Optimization & Interfacing**
- Developed optimized **C++ modules** for handling high-throughput data streams on Linux, employing multi-threading and IPC mechanisms for performance improvements.

Tech Stack: C++, RTOS, Linux System Programming, pthreads, POSIX Sockets, Python, REST, Vue.js

Software Developer

Soar Robotics | November 2019 – April 2021 | İstanbul, Turkey

Focused on **C/C++ development** for drone simulations and communication systems.

- Developed **real-time UAV simulations** using **C++**.
- Implemented **socket programming** with **TCP/UDP** for real-time drone-to-ground communication.
- Worked on **V2X** simulations with **SUMO**, **Veins**, and **NS2** for autonomous driving use cases.
- Built **Simulair**, a distributed simulation platform using C++ and **AWS** (with some other web technologies.)

Tech Stack: C++, TCP/UDP Sockets, SUMO, Veins, NS2, AWS

Software Developer(Part-Time)

WalkOVR | October 2018 – August 2019 | İstanbul, Turkey

Focused on C/C++ development for motion systems with cross-platform driver and sdk development.

Tech Stack: C++, Sockets

Education

Bachelor of Science in Electrical Engineering

Istanbul Technical University | 2016 – 2020 | İstanbul, Turkey

- **Final Thesis:** Developing a Tool with Python for EEG Data Analysis
 - **Courses Taken Parallel with Profession:**
 - Calculus
 - Differential Equations
 - Linear Algebra
 - Numerical Methods
 - Microprocessor Programming
 - Numerical Circuits
 - Python Programming
 - Control Systems
 - Signals and Systems
 - Design of Electrical Vehicles
-

Courses

C Programming Course

Institute: Necati Ergin - 200 hours of comprehensive training on C programming.

C++ Programming Course

Institute: Necati Ergin - ~200 hours of comprehensive training on C++ programming.

Timeline

2013 - Started at Istanbul Technical University in the Civil Engineering Department.

2015 - Went to the USA for the “**Work and Travel**” program.

2015 - Started a Mechanical Engineering Minor at ITU with a 3.3 GPA.

- Employed as a mechanical design intern at Robostate.

- Attended “**ARIGE**”, the Student Robotics Club:

- Participated in Marmara Robot Olympics, securing second place and the Jury Special Award.

- Attended ODTÜ Robot Olympics.

- Worked with “**PARS ROCKET TEAM**” on the design and manufacturing of the rocket payload, and also in the software department. The team achieved fourth place at IREC.

2016 - Transferred to the Department of Electrical Engineering.

2016 - Co-founded ITU Rover Team:

- Led the robotic arm team.

- Developed the user interface for the rover.

- Joined “**OTG**”, the game development club. Developed games, organized events, and participated in game jams.

2017 - Started working as a part-time junior software engineer at Robostate, continuing until the company closed in 2018.

2018 - Began working at WalkOVR:

- Ran a successful Kickstarter campaign with WalkOVR.

2019 - Started working at Soar Robotics, founded by the former founders of Robostate.

2020 - Graduated from Istanbul Technical University with a BSc degree in Electrical Engineering.

2021 - Joined CTech.

2022 - Began working at Havelsan.

2023 - Started working at Born Immersive.

Languages

Turkish: Native

English: - Overall IELTS Score of 7.0

Skills

- **Programming Languages:** C++, C, Python, C#, Javascript
- **System Programming:** Linux System Calls, POSIX APIs, Process Management, IPC
- **Embedded:** RTOS, Embedded Linux, Stm32
- **Devops and VCS:** Git, GitHub, Jenkins, GitHub Actions
- **Networking:** TCP/UDP Socket Programming, Multi-Threading, Real-Time Data Synchronization
- **Graphics APIs:** Vulkan, OpenGL, Compute Shaders
- **XR Frameworks:** Unity XRITK, MRTK, OpenXR, Hololens 2
- **Backend Technologies:** ASP.NET, REST, Flask, Microservices
- **Simulation & Robotics:** Distributed Systems, Drone Simulation, Real-Time Systems, Ros2