

AYŞENUR YÖRÜR

Computer Engineer — Graphics & Low-Level Systems

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C / C++ • GPU • Compiler Infrastructure

0x41595345

// Summary

I am a computer engineer with interest in low-level software development.

// Education

Istanbul Medeniyet University

Sep 2021 – Aug 2025

Computer Engineering

GPA: 3.85/4.00. Ranked 1st in the Faculty of Engineering and Natural Sciences.

// Experience

HAVELSAN

Nov 2025 – Present

Software Engineer

- Developing an offline shader compiler supporting little-endian and big-endian architectures and GPU-specific ISA generation.
- Refactoring and improving C code for safety-critical graphics software in accordance with DO-178C requirements.
- Supporting shader compiler testing, debugging, and code quality improvement activities.

HAVELSAN

Apr 2025 – Oct 2025

Candidate Engineer

// Projects

5-Stage RV32I Pipeline • Repository

SystemVerilog • RISC-V • Verilator • Konata

- Implemented and tested a simple five-stage RV32I pipeline with basic hazard handling and pipeline tracing.

Emergency Drone Coordination System • Repository

C • POSIX Threads • BSD Sockets

- Implemented a multi-threaded drone coordination system using synchronization primitives and TCP socket communication.

megen • Repository

C • TOML • LaTeX • HTML • CSS • JavaScript • Make

- Built a single-source publishing pipeline that generates both an ATS-oriented PDF CV and a responsive static portfolio from profile.toml.
- Implemented validated TOML parsing, explicit memory ownership and cleanup, conditional links, and data-driven project, research, award, image, and video rendering.
- Developed a responsive justified technical-media gallery with natural aspect ratios, accessible lightbox behavior, and static asset copying.

// Research Experience

Mobile Phone-Based Victim Localization in Debris Using Multiple UAVs • Video

Mar 2024 – Apr 2025

Istanbul Medeniyet University

Supported by NVIDIA

C++ • ArduPilot • ROS • Gazebo • MAVROS

- Developed a Gazebo and ROS environment for coordinating three UAVs in formation flight.
- Implemented autonomous UAV flight software in C++ for a search-and-rescue mission.
- Configured the NVIDIA Jetson Xavier development environment and project dependencies.

Machine Learning-Based Integrated Decision System for Water Extraction Depth

Istanbul Medeniyet University

Apr 2023 – Jan 2024

Supported by TÜBİTAK 1002

Python • Machine Learning • Data Analysis • Data Science

- Prepared the project dataset from online data sources, including data preparation, cleaning, exploratory data analysis (EDA), and feature engineering.
- Developed Python-based prediction models for estimating chlorophyll concentration in water.

Aerial Radio Signal Localization Using a Low-Cost Fixed-Wing UAV

Istanbul Medeniyet University

Jan 2022 – Jan 2023

Supported by TÜBİTAK 2209

Gazebo • Fixed-Wing UAV Simulation • ROS • Python • MAVROS

- Developed and tested flight algorithms for a fixed-wing UAV using a Gazebo simulation environment.
- Contributed to the Gazebo simulation component of the project, while signal detection and localization algorithms were evaluated separately in MATLAB.

// **Awards**

3rd Place — VRX 2023 Virtual RobotX Competition

2023

RobotX • Certificate

- Developed autonomous navigation components in Python for a ROS 2 and Gazebo-based unmanned surface vehicle, including path planning and obstacle avoidance.

Performance Award — International UAV Competition

2023

TEKNOFEST • Certificate • Project • Video

- Led the team as Team Captain and developed UAV flight and simulation software using Python, ROS, MAVROS, and Gazebo for an autonomous target tracking and capture system.

// **Certificates**

C Programming For Beginners

Nov 2022

Huw Collingbourne • Credential

Plepa C++ Course

2023 – 2024

Necati Ergin • Credential

International UAV Competition — Participation Certificate

2022

TEKNOFEST • Credential