

Seymen Kalkan

C++ Software Developer • Qt • VTK • Embedded Linux

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Professional Summary

C++ software developer specializing in Qt and Embedded Linux with professional experience building high-performance desktop applications. Experienced in multithreaded systems, rendering pipelines, and performance optimization, with a strong focus on software architecture and maintainable code.

Professional Experience

MEDPOINTR

C++ Software Developer

May 2023 – Aug 2025

Ankara (On-site) / Bayburt (Remote Freelance)

- Designed and maintained the Qt application layer, VTK rendering integration, multithreaded processing pipeline, and DICOM workflow for a real-time medical imaging system running on NVIDIA Jetson.
- Ported and stabilized multithreaded rendering code from x86 to ARM, resolving synchronization issues exposed by ARM's weaker memory model.
- Integrated OpenCV into the imaging pipeline and optimized the VTK rendering system to sustain real-time performance on embedded hardware.
- Worked twice as a freelance developer to lead the transition toward a medical training platform, implementing measurement, scoring, calibration, and PDF reporting features.

Selected Projects

XQMprViewer

Open-source Qt/VTK MPR DICOM viewer built to explore rendering architectures and high-performance medical visualization. Implements synchronized MPR navigation, configurable viewport layouts, interactive 3D annotations, and live benchmarking of alternative rendering topologies.

Technologies: C++17, Qt6, VTK, DICOM, Doxygen

CodExam

Online coding assessment platform providing secure Docker-based code execution, real-time monitoring, anti-cheat detection, and submission replay. Led the overall system architecture within a three-person development team.

Technologies: ASP.NET Core, React, TypeScript, PostgreSQL, Docker, SignalR

Education

Atatürk University

Bachelor of Science in Computer Engineering

Oct 2024 – Present

Erzurum, Turkey

Eskişehir Technical University

Associate Degree in Computer Programming

Sep 2021 – Jul 2023

GPA: 3.89 / 4.00 • Ranked 1st Overall

Technical Skills

Programming Languages: C++ (11/14/17/20), TypeScript, JavaScript, Python

Frameworks & Libraries: Qt, VTK, OpenCV, OpenSSL, React, Node.js, Express, ASP.NET Core

Systems & Platforms: Embedded Linux, NVIDIA Jetson, V4L2, L4T

Databases: PostgreSQL, MariaDB, MySQL, SQLite, Microsoft SQL Server

Developer Tools: Git, GitHub Actions, CMake, Docker, Ninja, GTest