Osamah Alananzeh

COMPUTER ENGINEER

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Summary

Motivated Computer Engineer with a strong foundation in software development, systems design, and network technologies. Experienced in C, C++, and Python, with hands-on expertise from 42 School projects including system-level programming, graphics rendering, and AI-driven automation. Skilled in building reliable, efficient solutions through a mix of low-level programming and modern software engineering practices. Passionate about problem-solving, continuous learning, and developing scalable, real-world applications.

Educational History

BACHELOR'S DEGREE IN COMPUTER ENGINEERING
AlBalqa'a Applied University
2021 - 2025

MASTER'S-LEVEL CURRICULUM
42 Amman
Aug 2024 - present

- Project-based computer science program focused on algorithms, system programming, and peer-to-peer learning.

Skills

- Proficiency C
- C++ (OOP)
- Data Structures and Algorithms
- assembly
- Testing and debugging techniques
- Java
- Adaptability and continuous learning
- Version control: Git and GitHub
- SQL

Projects

Minishell in C

- Developed a mini Unix shell in C supporting pipes, redirections, environment variables, and process management..
- Improved code modularity and debugging through Valgrind and Makefiles.

Cub3d in C using Minilibx

- Implemented a 3D rendering engine in C using raycasting and MiniLibX, handling textures, collisions, and real-time player movement.

CPP Modules

- Completed the full C++ modules at 42, gaining strong proficiency in object-oriented programming, memory management, and advanced C++ concepts such as inheritance, polymorphism, templates, and exception handling. Developed multiple projects emphasizing clean architecture, SOLID principles, and efficient use of the Standard Template Library (STL), strengthening both low-level understanding and modern C++ design practices.

Graduation Project

- Conversational firewall management: Chatbot-Guided firewall Operations
- Developed an AI-powered conversational interface for firewall management using FastAPI, React, and VLLM. The system interprets natural language to configure and monitor an OPNsense firewall via secure REST APIs, improving automation and reducing human error.

Languages

ARABIC: NATIVE
ENGLISH: ADVANCED