

Rüveyde Orman

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PROJECTS

Python TCP Port Scanner | *Python, Socket Programming, Docker, Networking*

- Developed a command-line TCP port scanner in Python for network security assessment that **scans and identifies open ports** on target systems
- Implemented SYN scan, connect scan, and UDP scan techniques with **configurable timeout and thread management**
- Added banner grabbing functionality to identify services running on open ports and displays results in real-time
- **Containerized the application using Docker** for easy deployment and portability across different environments
- Created a **Dockerfile** to package the scanner with all dependencies, enabling one-command setup and execution

2D Game Engine Development | *C++, SDL2, Box2D, OpenGL, Entity-Component System*

- Developed a custom 2D game engine using **C++ with SDL2 and Box2D libraries**, implementing all core engine systems from scratch
- Designed and implemented a **complete physics engine** leveraging Box2D for realistic rigid body dynamics, collision response, and constraint solving
- Built entity-component system architecture from the ground up for flexible game object management and rendering pipeline
- Implemented custom **animation system**, sprite rendering, and game mechanics with optimized memory management and performance
- Created sample games (platformer, snake clone) to demonstrate engine capabilities, **with particular expertise in physics simulations**

Atari-Style Game Development | *C++, Custom Game Engine, Game Development*

- Leading a team as **Team Captain** in professor-led game development project to create an **Atari-style retro game**
- Developing the game using **C++** with professor's **custom game engine**, implementing classic game mechanics and controls
- Coordinating team tasks, managing development timeline, and ensuring code quality across team members
- Collaborating on game design, sprite creation, and implementing retro-style gameplay elements

File Scanner Utility | *C, Systems Programming, POSIX, File I/O*

- Developed a command-line **file scanner utility in C** that recursively traverses directories to find files matching user-specified filters
- Implemented **recursive directory traversal** to search through nested directories and subdirectories efficiently
- Added support for various **filtering options** (file extensions, name patterns, size ranges, modification dates) to locate specific files
- Designed custom file matching algorithms that display results with full paths and file metadata
- Implemented **file I/O operations, string parsing, and memory-efficient buffer management** for handling large directory structures
- Focused on **robust error handling** and preventing segmentation faults during permission-denied scenarios

Student Registration System | *C++, OOP, Microsoft SQL Server, GUI*

- Built a **student registration system in C++** using **OOP principles** (encapsulation, inheritance, polymorphism) for university management
- Connected to **Microsoft SQL Server database** for storing student, course, instructor, and department information
- Implemented **database connectivity** via ODBC for seamless CRUD operations
- Developed a **graphical user interface (GUI)** in C++ for easy interaction with the database system

- Enabled **student enrollment, course registration, instructor assignment**, and academic record tracking
- Designed normalized database tables with **entity-relationship diagrams** for data integrity

Automated System Monitoring Script | *Bash, Crontab, Linux System Administration*

- Created a Bash script that collects real-time system information (CPU usage, memory, disk space, running processes)
- Configured **crontab for automated scheduling** to generate daily system health reports
- Implemented log rotation and email alerts for critical system events (low disk space, high CPU load)
- Designed modular structure allowing easy addition of new monitoring metrics

LEADERSHIP & WRITING

Medium Technical Writer | *Technical Blogging*

- Published **technical articles** on Medium covering C++, game development, cybersecurity, and software engineering topics

Writing Committee Chair | *Community Leadership*

- Served as **Committee Chair** for community writing initiatives, leading editorial teams and managing content strategy

EDUCATION

European University of Lefke (EUL)

Bachelor of Science in Software Engineering (Full Scholarship - English Medium)

- **CGPA:** 3.25/4.00

2022 – Present

Lefke, North Cyprus

19 Mayıs Anadolu Lisesi

High School Diploma

- Mathematics and Science Track

2018 – 2021

Mersin, Turkey

SKILLS

Programming Languages : \LaTeX , Java, C#, C, C++, Bash, Python, **T-SQL**

Database Systems : **Microsoft SQL Server**, T-SQL, Database Design, Query Optimization

Cybersecurity & Networking : Network Security, TCP/IP, Nmap Scanning, Wireshark Traffic Analysis, Port Scanning, Vulnerability Assessment, Penetration Testing

Systems & Tools : Linux, Linux System Administration, GitHub, Docker, Figma

Human Languages : English (C1), German (A2), French (A2)