Mohamed Khalil Mzoughi

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Education

TEK-UP Private College of Engineering & Technology Sep. 2024 – Present
Bachelor of Engineering (B.E.) in Computer Engineering *University in Tunisia*

Institute of Arts and Multimedia Manouba Sep. 2021 – May 2024
Bachelor's Degree in Video Game Development *University in Tunisia*

Institute of Arts and Multimedia Manouba Sep. 2020 – May 2021
Associate Degree in Multimedia Communication *University in Tunisia*

Experience

Upwork May 2023 – Present
Freelance *Remote*

- Developed features and designed systems in both Unity and Unreal for 5+ client projects.
- Collaborated with team members using **Git** for version control and task management.

Lanterns Studio Jan. 2024 – June 2024
Game Developer Intern *Charguia, Tunis*

- Developed core systems and minigames for a local co-op split-screen game using **Unreal Engine 5**, **Blueprints**, and **C++**
- Improved rendering efficiency and visual fidelity by implementing **LODs** and **Nanite**, reducing frame drops by **20%** efficiency.
- Created **reusable** code modules for UI and gameplay systems, enhancing team productivity for future projects.

Projects

Online Multiplayer Pong | *C/C++, SDL2, WinSock API* Feb. 2025 – Present GitHub

- Developed a local and online multiplayer Pong game using **C++** and **SDL2** for rendering and input handling.
- Implemented a **client-server architecture** using **TCP/IP** to synchronize game states across networked devices.
- Enhanced performance with **multi-threaded game loops** and frame-rate control for a smooth experience.

Chess | *C#, Unity* May 2024 – Present GitHub

- Developed a functional chess game with standard gameplay mechanics.
- Implementing matchmaking and game lobby systems.
- Applied SOLID principles and design patterns to enhance maintainability.

2D top-down shooter | *C#, Unity* June 2024 – Present GitHub

- Developed a performance-optimized 2D game with mouse-based movement and shooting mechanics, enhancing interactivity and responsiveness.
- Implemented object pooling for efficient projectile and enemy management, reducing memory usage and improving performance.
- Designed AI-driven enemy behavior with intelligent targeting and dynamic difficulty scaling, creating a progressively challenging experience.

Technical Skills

Programming Languages: C/C++, C#, Python, Java, SQL, HTML/CSS
Software & Tools: Unity, Unreal Engine, Visual Studio, VS Code, Git, Blender
Languages Spoken: Arabic, English, French

Miscellaneous

- **Certifications:** RHCSA (Red Hat Certified System Administrator)

- **Competitions:** Challenge Talim 2025(**1st Place**), Globule Game Jams 2023/2024(**Participant**), Participant - La Nuit d'Info 2024

- **Technical Books:** *Clean Code*(Robert C. Martin), *C# in Depth* (Jon Skeet), *Head First Design Patterns* (Eric Freeman)