

Tareq Malkawi

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Professional Summary

R&D Engineer at Jadara Equipment & Defense Systems, developing advanced UAV ground control stations for mission-critical operations, including guided kamikaze strike capabilities and payload deployment systems. Skilled in C++, Qt, and Python for real-time, high-reliability applications. In parallel, I bring over six years of gameplay programming experience in Unreal Engine and Unity, focusing on core systems such as AI, physics simulation, and character mechanics — blending engineering precision with creative design.

Experience

R&D Engineer

Jadara Equipment & Defense Systems

Jordan, Al Zarga

01/2025 – Present

- Develop advanced UAV ground control stations for mission-critical systems such as guided kamikaze strikes and payload deployment.
- Design real-time control software using C++, Qt, and Python, ensuring reliability and precision under military constraints.
- Implement embedded communication systems using ESP32, Arduino, and PIC microcontrollers, integrating telemetry and control via UDP/TCP protocols.

AI & Data Science Intern

Tahaluf Al Emarat Technical Solutions

Jordan, Irbid

08/2023 – 01/2024

- Gained hands-on experience in data science and machine learning with tools like NumPy, Pandas, Scikit-learn, Matplotlib, and Seaborn.
- Completed multiple projects and participated in Kaggle competitions, exploring algorithms and data pipelines.
- Strengthened mathematical foundations in linear algebra, probability, and Python OOP.

Skills

- **Programming Languages:** C/C++, C#, Python, JavaScript, and Arduino C.
- **Game Engines & Tools:** Unreal Engine, Unity3D, Qt6, Visual Studio, Git, GitHub
- **Embedded & Hardware:** Linux, ESP32, Arduino, PIC Microcontrollers
- **Networking & Protocols:** UDP, TCP/IP, MAVLink, Socket Programming
- **Art & Design:** Adobe Illustrator, Photoshop, Blender
- **Soft Skills:** Problem-solving, Time management, Teamwork, Documentation

Projects

Hot Air Balloon Physics — Blimp Physics – *Unity3D, C#*

03/2024 – 07/2024

- Designed and simulated hot air balloons and blimps using real-world aerostatic physics.
- Built AI control systems and realistic player controllers.
- Prepared detailed documentation covering UI systems, control schemes, and physics models.
- Published on Unity Asset Store. [Hot Air Balloon Physics — Blimp Physics](#) 📄

Third-Person Shooter Prototype– *Unreal Engine 5, C++*

03/2023 – 08/2023

- Created a full gameplay loop including locomotion, inventory, and weapon systems.
- Developed AI behaviors using behavior trees for combat and patrol logic.

Education

Jordan University of Science and Technology – Irbid, Jordan

BS in Computer Engineering

09/2018 – 01/2024