Ragy Nour
Unity Programmer

Giza |Egypt
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Portfolio

Summary

Gameplay-focused developer with hands-on experience in building and publishing interactive applications:

- *Game Development*: Designed and launched Unity-based mobile games, solving complex gameplay logic, collision handling, and performance bottlenecks.
- *App Deployment*: Delivered production-ready apps with monetization features (ads integration) and 1,000+ downloads on Google Play.
- *Problem-Solving*: Strong foundation in algorithms, debugging, and optimization, actively sharpening skills through coding challenges.
- *Technical Breadth*: Background in Electronics & Communication Engineering with practical exposure to signal processing, 3D tools (Blender), and circuit design.

Skills

- *Languages: C# , HLSL (Shaders), Python, MATLAB, JSON/CSV parsing.*
- *Unity Development: Animation Rigging (Inverse Kinematics), NavMesh AI, Finite State Machines (FSM), Physics API, UGUI/UI Toolkit.*
- *Graphics & Optimization: Compute Shaders, GPU Instancing, Draw Call Reduction, Memory Management (Lazy Loading), Profiler & Frame Debugger.*
- *Tools: Blender (3D Modeling), Git/Version Control, Visual Studio.*
- *Core Concepts: OOP, Linear Algebra (Vector Math), Data Structures, Algorithms.*
- *Languages: English, Arabic*

Projects

Tri–Language Dictionary Translator | Unity, C#, UI Integration

- Engineered a memory-efficient audio system using a Lazy Loading pattern; reduced runtime memory footprint by streaming audio clips from disk on-demand rather than pre-loading the entire library into RAM.
- Developed a flexible data structure to parse raw CSV datasets into custom C# objects, enabling bidirectional search capabilities (allowing users to query a word in any of the three languages to retrieve the corresponding translations).
- Owned the full product lifecycle, iterating on UI/UX designs based on user feedback to create a responsive, intuitive interface, resulting in over 1,000 organic downloads on the Google Play Store.

  [Link to Google Play Store]

3rd–Person Football Mobile Game | Unity, C#, HLSL, Blender

- Engineered a GPU-based crowd rendering system, replacing standard SkinnedMeshRenderers with GPU Instancing and Animation Texture Baking to render thousands of fans with minimal draw calls.
- Programmed physics-aware AI for goalkeepers that calculates ball velocity trajectories to determine intercept states, blended with standard Finite-state machine logic for player positioning and man-marking.
- Utilized Procedural Animation (IK) to solve gameplay-visual discrepancies, ensuring precise contact points between player models and the ball physics object during high-speed interactions.
- Built robust data systems for the "Manager Mode" dashboard, handling save states for team lineups, economy (player transfers), and unlockable content.

[Link to Game play Video](#)

Experience

2021-Present

Squaresum Games – *Freelance / Game Developer*
- *Delivered freelance development projects including games and utility app creation.*
- *Managed all aspects of the development life cycle and client communication.*

Education

2014-2019

Nile University Giza, Egypt – *Bs, Communication and Electronics Engineering*

- Graduated with 3.52 GPA
- Dean's Honor List