HAMZA MOHAMAD

Portfolio   **LinkedIn**   **Github**

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Arabic (native)   **English (advanced)**   **German (intermediate)**   **French (beginner)**

SUMMARY

Game Developer with experience in Unity 2D, 3D & VR, object-oriented programming, optimization, debugging and writing clean code. Ability to learn quickly and use new programming languages, tools and applications.

EDUCATION

- **Video Game Programming Attestation of College Studies** (**2021 – Present**)
  - L'institut Supérieur d'Informatique, Montreal, Canada.
- **Electrical and Electronics Engineering Bachelor degree**   (**2013 – 2019**)
  - Higher Technological Institute, Egypt.

TECHNICAL SKILLS

- **Languages:** C#, C++, Java, SQL, Python, HTML, CSS, JavaScript.
- **Collections:** Dictionaries, HashSet, ArrayLists, LinkedList, Queues, Stacks, Enumerable.
- **Architectures:** Top-Down, Component based, Event based, Coroutine based.
- **Design Patterns:** Factory Pattern, Object Pools, Manager, Singletons, State Machines, Strategy Pattern, Command Pattern, ECS, Async, Batching, MVC, Observer Pattern
- **Concepts:** Reflection, Extension Methods, Property Groups, Attributes, Multi-threading, Partial Class code generation, Anonymous, Params, Cashing, OCP Modular architecture, Decoupling.
- **Debug:** Breakpoints, Enforce defensive coding techniques, Unit Test.
- **AI:** State, A*, GOAP, Behavior Tree, Flocking, BFS, DFS.
- **Serialization:** XML, JSON, Binary, Text.
- **Management:** Agile, Agile Scrum, TDD, XP.
- **Unity 2D, 3D, VR:** Editor scripting, Editor Variables/Menus, UI, Physics, Animation, Sound, Particle System, Render optimization, Nav Mesh, Tilemap, Materials, Lighting, Scriptable Objects.
- **External software:** OpenGL, Git, Github, Github for Windows, Bitbucket, Blender, Jira, Click up, Trello.
- **Communication & Interpersonal:** Teamwork, Active Listening, Self-Motivation, Hard Worker, Social intelligence, Leadership, Problem-solving capability, Mathematical skills, Organizational skills.

INTERESTS

● Big data   ● Quantum Computing   ● Photography

EXPERIENCE

- **Site Engineer** **(2020 - 2021)**
  - ➢ Riyadh Al-Etqan Company, Saudi Arabia.
  - Description:
    - ➢ Planning & Control: Quantity Survey, Inspection Request,
      Electrical Submittals and Daily Reports handling.
- **Youth Mentor** **(2016 – 2018)**
  - ➢ Hayah International Academy, Egypt.
  - Description:
    - ➢ Middle school students mentoring.
    - ➢ Character building and strategic planning.
    - ➢ Tours and journeys preparation in Egypt.

Extracurricular Activities

- **Document Control** **(2009)**
  - ➢ RIO Contracting Company, Saudi Arabia.
  - Description:
    - ➢ Oracle expedition software implementation.
- **Volunteer** **(2010 - 2013)**
  - ➢ Al-Sediq Charity, Egypt.

Projects

Siege Master **Github Video**
Unity 3D, C#, PC, VR, Third person shooter, Tower defense

The game was built by using Top-Down based, Strategy pattern to manage Factory pattern & object pool, Command pattern, Open Close Principle and States machine concept. Also it is an endless wave survival, enemies never stop coming and you must defend your castle using your hero's weapons and special abilities, as well as placing towers.

Get it & Get out **Github Video**
Unity 3D, C#, VR, Grappling hook

The game made with features like destructible buildings, flocking AI and particle system. Also built by using Top-Down based and singleton. You must go around a city and bring the treasures to the gate of city before the lava destroying the city then go to next level.

For more projects visit my portfolio website.

References available upon request