

# ZEN HAMAM

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[Projects](#) | [Linkedin](#) | [GitHub](#)

Junior Software Developer with a **BSc in Game Software Engineering** and hands on experience building systems in **C++, C#, Python, and JavaScript**. Skilled in gameplay programming, **full-stack** development, and automation. Strong problem solving ability, clean coding practices, and a passion for creating interactive, efficient software. Fluent in **English, Italian, and Arabic**.

## TECHNICAL SKILLS

- **Languages:** C++, C#, Python, JavaScript, TypeScript
- **Frameworks/Engines:** Unity, Unreal Engine 5, Node.js
- **Tools:** Git, GitHub, REST APIs, N8n Automation
- **Concepts:** OOP, State Machines, Multiplayer Replication, Data Structures
- **Other:** Agile teamwork, debugging, optimization, version control

## PROJECT EXPERIENCE

### 2D Arcade Game Engine — C++ | SDL2 | [Project Link](#)

- Built a modular **2D game engine** with systems for rendering, **collision detection**, and input handling.
- Designed reusable architecture using **OOP principles** for maintainability.
- Implemented sprite batching and modular systems to **improve performance** and scalability.

### Aura Multiplayer RPG — C++ | Blueprints | Unreal Engine 5 | [Project Link](#)

- Developed a **replicated multiplayer** gameplay system supporting synced movement and interactions.
- Built UI elements and input mapping, integrating **C++ and Blueprint logic**.
- Implemented state driven behaviour for consistent, **predictable gameplay flow**.

### Movie Night Meal — JavaScript | Node.js | [Project Link](#)

- Built core logic for recipe generation and wishlist features using **Node.js and MongoDB**.
- Integrated **Google OAuth** for secure user login and personalised **data storage**.
- Implemented **OpenAI API** to generate recipes matched to each movie's theme.
- Developed wishlist **CRUD** operations and recipe/guessing game logic in a team of four.
- Designed dynamic UI features including **automatic colour palette theming** based on selected movies.

## EDUCATION

- **BSc (Hons) Game Software Engineering** — Bournemouth University (2021–2025)  
Key modules: **AI Systems**, Game Programming, Software Design, **Physics Simulations**
- [Founders and Coders](#) — Full-Stack Web Development Bootcamp (2025–Present)  
**JavaScript, Node.js, APIs**, Test Driven Development, collaborative Agile workflow