Hajar Zaiz

hajarzaiz.github.io | hajarzaiz04@gmail.com | linkedin.com/in/hzaiz

Research & Industry Experience

Salesforce, Inc. | *Technical Architect* — Casablanca, Morocco
- ◇ Led end-to-end solution architecture across Marketing, Sales, Service, and Data Clouds. *Jan. 2023 – Present*
- ◇ Developed mobile-responsive, dynamic emails, and reusable code snippets using AMPscript, SQL, and SSJS.
- ◇ Designed, developed, and deployed complex Marketing Journeys and Automations in Salesforce Marketing Cloud.
- ◇ Implemented API integrations (REST/SOAP) between SFMC, CRM, Data Cloud, and external systems.
- ◇ Defined identity resolution rulesets and calculated insights for profile unification and multi-channel activation.
- ◇ Built Agentforce agents for automatic case creation, escalation, account summaries, and automatic field generation
- ◇ Worked with cross-functional teams and advised clients on GDPR and CAN-SPAM laws ensuring solutions meet security, privacy, consent, and compliance requirements.

Take This, Inc. | *Accelerate Fellow* — Kirkland, WA (Remote)
- ◇ Selected as 1 of 10 global fellows to develop game-based interventions for physical therapy. *Sep. 2025 – Present*
- ◇ Developed a high-fidelity locomotion system to increase player immersion and implemented vaulting, parkour, and ladder climbing mechanics in Unreal Engine 5 using Blueprints.
- ◇ Designed and developed an enemy AI Behavior Tree to simulate realistic threat responses by integrating a "Fear Scale" that dictates patrol, chase, and retreat states.
- ◇ Investigated character mirroring and identity mechanics to increase player immersion and empathy by designing protagonists that reflect patient-specific physical challenges.
- ◇ Engineered narrative suspense and ambiguity to sustain long-term intrinsic motivation.

Girls Make Games | *Game Development Instructor & Tech Lead* — Raleigh, North Carolina (Remote)
- ◇ Directed game projects and mentored teenage girls in game design, art, and programming. *June 2024/June 2025*
- ◇ Managed playtests and milestones, tracking bugs and prioritizing features to keep development on schedule.
- ◇ Developed Unity and Construct 3 features, resolved bugs, and ensured timely project delivery.
- ◇ Guided mentees to present and pitch their games to industry experts from top studios

Status.im | *Part-time Research Intern* — Singapore, SG (Remote)
- ◇ Developed a Python simulator to study multiple protocols for data availability sampling. *Jan. 2023 – June 2023*
- ◇ Fine-tuned key parameters to optimize the recovery of lost or corrupted blocks in the network.
- ◇ Published code supporting the open-source community and advancing research in decentralized data storage.

Al Akhawayn School of Science | *Undergraduate Researcher* — Ifrane, Morocco
- ◇ Designed and developed a Unity3D survival horror game as the research environment. *Jan. 2022 – Jan. 2023*
- ◇ Implemented the behavior tree of an intelligent antagonist and first-person game mechanics.
- ◇ Trained a CNN using Keras for real-time facial emotion recognition with $\sim 80\%$ test accuracy.
- ◇ Maneuvered menace levels in the survival horror game by tracking the player's facial expressions.

Oracle Labs | *Research Assistant Intern* — Zürich, Switzerland (Remote)
- ◇ Implemented a graph machine learning model for the early detection of adverse drug reactions from FDA medical records using similarity-based link prediction. *May 2022 – Sep. 2022*
- ◇ Extracted drug ingredients and their molecular formulas, and normalized drug names using the RxNorm API.
- ◇ Implemented DeepWalk and used FAISS to obtain node embeddings and ADRs similarity matrix.
- ◇ Evaluated the performance of the model using various ranking metrics like MAP and NDCG.

Nokia Networks | *Software Engineer Intern* — Sale, Morocco
- ◇ Developed a web application to streamline the installation to commissioning approval process for cellular towers. *Jun. 2021 – Aug. 2021*
- ◇ Implemented Role-Based Access Control using Django for 9 departments.
- ◇ Reduced workflow delays by implementing notifications to handle handoffs between teams.
- ◇ Worked closely with cross-functional teams and thoroughly documented the project for future maintenance.

Education

Al Akhawayn University (AUI)   Ifrane, Morocco

Bachelor of Science in Computer Science   *Sep. 2018 – December 2022*

Coursework includes: *Probability and Statistics, Data Structures, Analysis of Algorithms, Artificial Intelligence, Mathematical Modeling and Optimization, Languages and Compilers, Computer Organization, Operating Systems*

GPA: overall 3.94/4.0; CS-only 4.0/4.0

University of North Carolina at Charlotte (UNCC)   Charlotte, NC

International Student Exchange Program   *Aug. 2021 – December 2021*

Coursework includes: *Applied Linear Regression, AI for Computer Games, Game Design and Development*

GPA: overall 4.0/4.0; CS-only 4.0/4.0

Teaching Experience

Girls Make Games Camp Counselor, Teaching Game Programming and Producer	June-July 2024/2025
AUI CSC 2303 Object-Oriented Programming, Teaching Assistant	Spring 2022
AUI CSC 1401 Computer Programming, Teaching Assistant	Spring 2022
AUI Center for Learning Excellence Tutor, CRLA Accredited Tutor	Spring 2020 – Spring 2021
AUI CSC 2302 Data Structures, Teaching Assistant	Fall 2019

Game Projects

Procedural Generation of 3D Landscapes | *Unity*   [Paper]
  ◇ Developed procedurally generated natural 3D landscapes in Unity using fractal noise and erosion.
  ◇ Transformed 2D height maps into triangulated meshes by assigning vertices, UVs, and triangles.
  ◇ Enhanced landscapes through particle-based hydraulic erosion and implemented L-systems for generating trees.

Eternal Chase | *Unity, Blender*   [Demo][Code]
  ◇ Designed and developed a 3D endless runner with an infinite and procedurally generated race track.
  ◇ Incorporated Poisson disk sampling to position obstacles pseudo-randomly in the game.
  ◇ Implemented features such as player controls, particle systems, score tracking, and difficulty progression.

Awards

2025-2026 Take This Accelerate Fellow

2025 Girls Make Games (GMG) Fellowship Recipient.

2025 Indie Game Academy Emerging Market Scholarship Recipient.

2024-2025 Full sponsorship to join the International Game Developers Association (IDGA) as a Studio Affiliate.

2024 International Game Developers Association (IDGA) Virtual Exchange Grantee.

2024 Girls Make Games (GMG) Fellowship Recipient.

2024 Full sponsorship recipient for Women in Games International's Get in the Game Program, attending GDC.

2023 3rd prize in the MoroccoAI summer school program.

AUI President's List and Dean's List in all semesters.

2022 Graduated Summa Cum Laude.

2020 Arab and African Collegiate Programming Championship for Girls, seventh place.

2020 Finalist in the national NASA Space Apps Challenge.

2018 Al Akhawayn University full merit scholarship.

2018 Moroccan merit scholarship for outstanding results in the baccalaureate exams.

Community Involvement

Entertainment Software Association, Nite to Unite Volunteer	March 2024
AUI Computer Science for Innovation, Board Member	Spring 2020 – Spring 2021
AIESEC Turkey, Teaching Volunteer	Summer 2019
Dar Al Amane Orphanage in Azrou, Teaching Volunteer	Spring 2019