

Hajar Zaiz

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EDUCATION

Al Akhawayn University

Ifrane, Morocco

Bachelor of Science in Computer Science, Minor in Mathematics

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

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

RESEARCH & INDUSTRY EXPERIENCE

Salesforce

Jan. 2023 – Present

Associate Technical Architect

Casablanca, Morocco

Implemented marketing automation solutions in SFMC, using SSJS, AMPscript, and SQL

Architected data-driven solutions with cross-functional teams for clients such as Emirates Airlines and Nestlé

Improved client engagement by up to 30% by integrating Einstein Personalization and Data Cloud

Achieved strong performance in resource assessment resulting in contract renewals

Girls Make Games

June 2024 – Present

Game Development Instructor & Tech Support

Raleigh, NC (Remote and Seasonal)

Directed game development projects, mentoring teens in programming, game design, and pitching

Supported game design workshops by developing features, debugging, and ensuring timely project delivery

Guided mentees to pitch their Construct 3 games to AAA industry experts from top studios like Epic Games

Status.im

Jan. 2023 – June 2023

Part-time Research Intern

Singapore (Remote)

Developed a Python simulator to study multiple protocols for data availability sampling

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

Oracle Labs

May 2022 – Sep. 2022

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

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 model performance using various ranking metrics like MAP and NDCG

Nokia Networks

June 2021 – Aug. 2021

Software Engineer Intern

Sale, Morocco

Developed a web application to streamline the installation to commissioning approval process for cellular towers

Implemented department-specific permissions using Django for secure access control for over 500 users

Developed mobile responsive user interfaces using HTML5, CSS3 and JavaScript

TEACHING EXPERIENCE

Al Akhawayn University CSC 2303 Object-Oriented Programming, Teaching Assistant

Spring 2022

Al Akhawayn University CSC 1401 Computer Programming, Teaching Assistant

Spring 2022

[Kudos](#) Center for Learning Excellence, CRLA Accredited Tutor

Spring 2020 – Spring 2021

Al Akhawayn University CSC 2302 Data Structures, Teaching Assistant

Fall 2019

GAME PROJECTS

Procedural Generation of 3D Landscapes | *Unity, C#*

[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, C#, 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.

AI Puzzle Solver | *Python, Git*

[Code]

- ◇ Implemented a Python search shell for solving 8-puzzle, Peg Solitaire, and Missionaries and Cannibals.
- ◇ Used various search algorithms including BFS, DFS, Greedy Best first search, and A*.
- ◇ Created admissible and consistent heuristics for informed search strategies.

Alien Key | *GMS2, Git*

[Code]

- ◇ Developed a 2D game where one takes on the role of an alien tasked with finding their ship and returning home.
- ◇ Incorporated pathfinding, inventory management, and stealth-oriented gameplay mechanics such as setting traps.
- ◇ Awarded for best project implementation in ITCS4230 at UNCC.

AWARDS

2025 Emerging Market Scholarship Recipient, Indie Game Academy Level 3 Cohort

2024 International Game Developers Association Studio Affiliate, Full Sponsorship

2024 International Game Developers Association Virtual Exchange Grantee

2024 Girls Make Games (GMG) Fellowship Recipient

2024 Fully sponsored attendee at GDC, Women in Games International (1% acceptance rate)

2023 3rd prize, MoroccoAI summer school program

2018 - 2022 Al Akhawayn University President's List and Dean's List in all semesters

2022 Graduated Summa Cum Laude

2020 7th place, Arab and African Collegiate Programming Championship for Girls

2020 Finalist, 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