LEEN KHAROUF

COMPUTER ENGINEERING
INTERACTIVE MEDIA

EDUCATION

New York University Abu Dhabi

Bachelor of Science in Computer Engineering
GPA: 3.80 | Graduation: June 2025

Brighton College Abu Dhabi

A-Levels:
Maths (A*), Chemistry (A*), Physics (A*)
Graduation: June 2020

SKILLS

C++, Python, C, C#, HTML/CSS, PCB design, Cadence Design Systems, Numpy/Pandas/Matplotlib, MatLab

Unity Game Engine, Adobe Photoshop, Figma, Procreate, UX Design,

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LANGUAGES

English
Arabic
Spanish

CONTACT

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✉ leenkharouf@nyu.edu

🌐 leenkharouf.github.io/LKharouf/home/home.html

CERTIFICATIONS

The Web Developer Bootcamp 2024 (In progress)
Reinforcing skills in HTML, CSS, JavaScript, React, Node, MongoDB

Artificial Intelligence A-Z 2024 (In progress)
Building 7 AI models, mastering Q-Learning, Deep Q-Learning, A3C, PPO, SAC, Transformers, LLMs, LoRA, QLoRA, and NLP techniques for chatbots.

Google UX Design Professional Certificate (In progress)
User-centered design, UX research, and foundational design principles

PROJECTS

Optimisation of Zero-Shot Object Navigation Model (Python, Sep 2024 - present)
Optimised a machine learning framework for zero-shot object navigation using pre-trained vision-language models (CLIP, GLIP) to enhance object detection and common sense reasoning. Focused on improving the efficiency of Frontier-Based Exploration.

Medical LLM Benchmark - Student research assistant (Sep 2024 - present)
Refining Large Language Models to provide reliable health info by processing complex medical data and improving the user interface to ensure that responses are accurate and reduce the need for direct doctor consultations.

ECG Design (Sep - Oct 2024, Cadence Design Systems, Altium)
Designed and built an ECG instrumentation amplifier circuit. Developed the schematics on Cadence, designed the PCB on Altium, and collaborated with a manufacturer for production then assembled and soldered components.

Interactive 3D Self-Avoiding Walk Simulation (Unity, C#, May 2024)
Developed a 3D maze simulation featuring explosions that alter paths, multiple non-colliding agents, dynamic camera controls for optimal viewing, and a user-initiated reset functionality.

ColorScape: A Chromatic Game of Life (Unity, C#, April 2024)
Engineered a variant of the Game of Life where the canvas is segmented into colored zones influencing cell behavior, enhancing visual feedback and analytical depth of the simulation.

Cache Simulator (C++, Dec 2023)
Implemented a dual-cache system using a write-through, write-allocate policy and LRU replacement for associative caches to manage data efficiently and monitor cache interactions.

Embedded Messenger (Arduino, C++, Dec 2023)
Currently developing a handheld messenger device using embedded systems principles, featuring message creation through hand movements and display via LEDs.

Parallax: An Interactive Illustration (Javascript, June 2023)
Created an interactive artwork using Procreate and JavaScript, achieving a dynamic 3D effect with parallax motion, showcasing a fusion of technical skills and artistic creativity.

Flight Reservation System (C++, April 2023)
Designed an interactive user interface to replicate real-world flight search and booking, using dynamic memory allocation, classes, and objected oriented programming concepts. Integrated a random generator for flight database containing flight information, seat availability, and prices to test the system.

Fall Detection Device (Arduino, Dec 2021)
October 2021 - December 2021
Engineered a device using Arduino to detect falls and notify emergency contacts through automated alerts, equipped with a user-friendly interface for health evaluation.

PROFESSIONAL EXPERIENCE

Equipement Center Assistantship
NYUAD
Managing equipment, check-in/out and maintenance, including testing and inventory management, and supporting training sessions.

Freelance Graphic Designer & Artist
Founder & Operator
Developed a personal brand for art commissions, interacting with clients to tailor designs to their specifications, and created marketing materials to promote services