

Nadim Bou Alwan

📍 Doha, Qatar ✉ nadinator@proton.me 📞 +974 5503 4421 in nadimba 🌐 nadinator

Education

Carnegie Mellon University Qatar 2018 – 2022

B.Sc. Computer Science, Minor in Psychology

- GPA: 3.03/4.0
- **CS Coursework:** Machine Learning, Distributed Systems, Functional Programming, Embedded Systems, Parallel Programming, Algorithms, Probability, Computation Theory, Networks
- **Psych Coursework:** Social, Behavioral, and Cognitive Psychology, Research Methods, Perception, Neuroscience, Regression Analysis, Statistics, Biology, Evolution

Experience

Software Developer *Iberdrola Innovation Middle East — Doha, Qatar* June 2023 – Sept 2025

- Developed a real-time PPE violation detection system using YOLO, implementing end-to-end MLOps with CI/CD pipelines and DevOps best-practices, from dataset design to edge deployment.
- Extended the open-source annotation platform Label Studio with a custom React/Django architecture, improving large-scale data labeling and management workflows.
- Designed microservice-based systems with RESTful APIs to support modular components.
- Built a cloud-native network planning investment optimizer as a set of microservices.
- Collaborated regularly with power systems engineers, data scientists, product managers, designers, front-end developers, and clients/stakeholders.
- Wrote comprehensive unit tests for microservices using pytest to ensure code reliability and maintainability.
- Completed advanced coursework and certifications in deep learning theory and applied machine learning (DeepLearning.AI).
- Gained basic understanding of Kubernetes through extensive Docker usage and related deployment tasks.

CTO *Sanad — Doha, Qatar* May 2024 - Jan 2025

- Led technical development of the core product, providing leadership and mentoring to the engineering team.
- Managed project timelines, resources, and deliverables to ensure successful product development.
- Developed and tested the LLM-based chatbot forming the backbone of the platform

IT & Cybersecurity Intern *QRTD Information Technology — Doha, Qatar* Feb 2023 – May 2023

- Developed web applications using React/Flask/PostgreSQL.
- Created presentations for stakeholders, demonstrating strong communication and proactive stakeholder engagement on fundamental cybersecurity concepts.
- Introduced the team to better development tools and practices, contributing to improved cybersecurity awareness.
- Adapted quickly to new cybersecurity and fullstack development tools and concepts despite no prior experience.

Teaching Assistant *CMUQ* Jan 2019 - Mar 2020

- Served as Teaching Assistant for 15-112 Intro to Programming for three semesters.
- Graded exams, held office hours, ran labs, and met 1-on-1 with assigned students, effectively balancing multiple responsibilities and meeting academic deadlines.

Scholarships

Merit Scholarship *CMUQ* 2018 - 2022

Awarded a 30% merit scholarship for the full duration of undergraduate studies.

Research

The Effects of Digital Font Characteristics on Reading Capabilities

April 2021

Nadim Bou Alwan, Maha Al-Mulla

Investigated how variations in digital font design influence reading speed and comprehension using behavioral analysis methods and the *Labvanced* tool.

Projects

University Information Chatbot *Language Models, RAG*

[nadinator/sanad-rag.git](https://github.com/nadinator/sanad-rag.git) 

- Designed a retrieval-augmented generation (RAG) system to assist students with university-related queries.
- Combined LLaMA-2 with a sentence-transformer embedding model (all-mpnet-base-v2) to enable contextual responses grounded in university PDFs.
- Implemented custom pipelines for text extraction, embedding generation, and similarity-based retrieval.

PPE Detection in Edge Devices *Computer Vision, Deep Learning, MLOps*

- Developed real-time detection algorithm for PPE violations.
- Trained and tested the YOLO architecture for computer vision using thousands of images.
- Labeled and validated thousands of images.
- Demoed a working version for stakeholders while wearing full PPE gear.

Certification

Neural Networks and Deep Learning *DeepLearning.AI*

April 2024

Hyperparameter Tuning, Regularization, Optimization *DeepLearning.AI*

July 2024

Convolutional Neural Networks *DeepLearning.AI*

November 2024

Sequence Models *DeepLearning.AI*

December 2024

Azure Fundamentals AZ-900 *Microsoft*

April 2025

Product Innovation for Product Managers *Product Management Institute*

April 2025

Introduction to Agile Development and Scrum *IBM*

May 2025

Technical Skills

Languages: Python, JavaScript, Java, C, SQL, Bash

Frameworks: PyTorch, Streamlit, Ultralytics, Flask, Django, React, Node.js, Express

Data Tools: Pandas, NumPy, Scikit-learn, Label Studio

Development Tools: Git, VS Code, Docker, Kubernetes, Linux, Vim, PostgreSQL

Cloud: Azure (AZ-900, AZ-204 in progress), AWS

Spoken Languages: Arabic (Native), English (Fluent), Spanish (Basic), French (Basic)