

EDUCATION

NEW YORK UNIVERSITY | BSc IN COMPUTER ENGINEERING

May 2024 | Abu Dhabi, UAE
Full Scholarship Cum. GPA: 3.88 / 4.0

INTERNATIONAL SCHOOL OF CHOUEIFAT | HIGH SCHOOL DIPLOMA

Aug 2020 | Abu Dhabi, UAE
GPA: 4.0 / 4.0

AI RESEARCH

GPN-MSA | DNA LARGE LANGUAGE MODEL

Nov - Mar 2024

- GPN-MSA is a **pre-trained transformer architecture** used to encode genome sequences for genome-wide variant effect prediction.
- Retrained, fine-tuned, and optimized the model on the **HPC** using **PyTorch** and **snakemake** in order to improve model accuracy.

MOMA RESEARCH LAB | RESEARCHER

June - July 2023 | Abu Dhabi, UAE

- Developed new number systems in **Tensorflow** for machine learning models to achieve non-linearity without activation functions.
- Created and loaded **SLURMD** batch jobs for running machine learning models on the Jubail **HPC**.
- Created solutions to achieve non-linearity in the Fully Homomorphic Encryption domain.

DEVWORK

WAFR TECHNOLOGIES | SOFTWARE ENGINEER

July 2023 - Present | mywafr.com

- Wafr is a startup with the goal of creating a platform to allow users to redeem, spend, and earn from offers across multiple Loyalty Programs.
- Deployed and created scalable servers using **k8s** and **docker**.
- Created full-fledged **React Native** mobile app to serve customers.
- Created backend system using **Node JS** & **Strapi** frameworks.
- Created website using **React.js** & **Next.js** frameworks.
- Developed **Mixpanel Analytics** on the app and dashboards for product decisions.
- Analyzed KPI's such as the **MAU**, **Retention Rate**, **User Flow** diagrams to drive business decisions.

TRELLA | PRICING & TECH SPECIALIST

Jan 2022 | Abu Dhabi, UAE & Cairo, Egypt

- Trella is a leading startup with one of the first B2B marketplace for carriers and shippers in the freight industry in the MENA region.
- Collected/formalized/analyzed data from company databases through **SQL** to run hypothesis testing for auditing based purposes.

OPEN SOURCE PROJECTS

ANUBIS | OPEN SOURCE STUDENT FORUM

July 2023 | anubis-lms.io

- Anubis is a free open source learning management system serving thousands of students at New York University.
- Created the Anubis student forum in **React.js** & **Python Flask** for teaching assistants to answer student questions online.

CARCUIT | ANDROID APP

Jan 2021

- Created the first augmented reality circuit design and simulation app with **Unity** & **C#** to educate android users on basic component design in a more interactive manner.
- Integrated circuit simulation libraries in order to output values of circuit design elements.

ROBOTICS

NYUAD ROBOSUB | SOFTWARE ENGINEER & RESEARCHER

May – August 2022 | Abu Dhabi, UAE & Maryland, USA

- NYUAD Robosub is an ambitious student research group that reached Semifinals in Robosub 2022.
- Developed simulation environment in **Gazebo** and robot to run software simulations.
- Created strategy and state machine control systems to complete the competition.
- Created scripts to run Tiny **YOLOv4** on OAKD cameras and generate pointcloud data.
- Integrated cutting edge **SLAM** algorithms with **ROS** to localize robot underwater.

SKILLS

LANGUAGES

- Native English • Advanced Arabic

PROGRAMMING

- Python • C++ • C • C# • HTML5 • CSS3 • Matlab • Javascript

FRAMEWORKS

- ROS • Gazebo • Bootstrap • ReactJS • jQuery • React Native

DATABASES

- OpenCV • MySQL • MongoDB • PostgreSQL • MariaDB

TOOLS

- Git • Bash • \LaTeX • Docker • Redash • K8S

AWARDS

2022 18th/39 Robosub AUV - Underwater Robot Competition in USA, Maryland
2022 4th/15 CMPE init - Programming hackathon at NYUAD

PUBLICATIONS

- [1] M. Q. Nham and R. R. Hamdan. NYUAD Robosub: Automated underwater vehicle adaptation and control. *NYU Abu Dhabi*, 2022.