Dhiyaa Al Jorf

 github.com/DoodyShark   linkedin.com/in/dhiyaa-al-jorf   da2863@nyu.edu

EDUCATION

New York University Abu Dhabi (NYUAD), Abu Dhabi, UAE   August 2021 - May 2025
Bachelor of Science in Computer Engineering   *Current GPA: 4.0/4.0*

NYU Tandon School of Engineering   Fall 2023, Spring 2024
Study Away (Current)

RELEVANT COURSEWORK

Grades: Exclusively A's or Projected A's on all listed, completed courses
Courses:
Discrete Math, Linear Algebra, Number Theory & Cryptography, Numerical Methods, Probability &
Statistics, Object Oriented Programming, Ordinary Differential Equations, Advanced Digital Logic, Advanced
Circuit Analysis, Engineering Ethics Data Structures & Algorithms, Natural Language Processing, Embedded
Systems Design, Computer Architecture & Organization, Haptics & Telerobotics in Medicine

SKILLS

Programming: C/C++, C#, Java, Python, JavaScript, PHP, HTML/CSS, G-Code, Verilog/VHDL
Tools: Git/GitHub, Simulink, MATLAB, Fusion360, VS Code, Onshape, Simscale, LTSpice, PlatformIO, Arduino,
Unity, Xilinx, Microsoft Office
Operating Systems: Windows, MacOS, Linux (Ubuntu)
Languages: English: *Native* | Arabic: *Native* | French: *Intermediate*

EXPERIENCE

NYUAD.SPACE | *Researcher*   August 2022 - June 2023
nyuad.space is an Aerospace Engineering student-led team at the Engineering Design Studio (EDS) at NYUAD

- Successfully launched Project Haloship in the Spaceport America Cup 2023
- Designed, developed, and simulated structural components for the internal rocket skeleton of project Haloship
- Designed, developed, and simulated reusable recovery subsystem for project Haloship.
- Won the Dr. Gil Moore Aware for Technical Innovation for the design of the recovery subsystem
- Designed, developed, and tested reusable Hold-Down Release Mechanism (HDRM) for the Jet Propulsion Lab (JPL) as part of the JPL University Crowdsourcing Initiative (JUCI)
- Presented HDRM design at JPL headquarters in Los Angeles, California

Applied Interactive Multimedia (AIM) Lab | *Research Assistant*   February 2022 – July 2022
The AIM lab is a research lab at NYUAD that works with diverse facets of interactive multimedia and haptics in
applications such as medical training, entertainment, teleoperation, and interpersonal communication.

- Built a full-stack application for Katib, a device aimed at assisting post-stroke patients and children with motor disabilities (re)acquiring their writing skills
- Developed and tested a set of occupational therapy "games" aimed at post-stroke patients according to established procedures in partnership with physicians at Cleveland Clinic Abu Dhabi
- Modified the "games" to assist children in acquiring handwriting skills in partnership with education professionals at Cranleigh Schools Abu Dhabi
- Built tools for recording and processing data to utilize in the Katib platform

Projects

Ma Tahtahu Khat   October 2023 – December 2023

Natural Language Processing course term project aimed to create a toolchain to perform I'rab, or the Arabic grammatical process of extended sequence tagging involved in assigning diacritics and POS to words given their morphology and role.

- Utilize state-of-the-art morphological analyzers and disambiguators (SAMA & MADAMIRA)
- Implement HMM bigram approach with post-processing to POS tag a given sentence.
- Feature engineering POS-tagged sentences to extract appropriate information.
- Implement MEMMs and SVMs to produce appropriate semantic role labels for each word.
- Employ bash scripts to streamline morphalogical disambiguation, POS tagging, feature extraction, and semantic role labeling (training & testing).
- Final accuracy metrics of 78.95 %.

The Beehive   October 2023 – December 2023

Embedded Systems course challenge that analyzes data from the given 3-axis linear accelerometer to perform gesture recognition. The goal of the project is to create reliable gesture encryption for data transfer between people.

- Communicate with peripherals using SPI, I2C, USART, etc.
- Implementing digital signal processing strategies to preprocess and filter the accelerometer data.
- Employ Domain Time Warping Algorithm within very limited memory constraints to find nearest training gesture to recorded time series.

A Fine Day   August 2021 – December 2021

A course term project aimed to create a gamify post-stroke rehabilitation exercises while collecting patients' precise data.

- Incorporated hand-tracking by integrating the Ultraleap Unity libraries into the game
- Created gamified exercises according to standerdized occupational therapy exercises

WashAD   November 2021

Created as a submission to the HackNYUAD Hackathon 2021

- Developed a web app prototype of a laundry management system for the university dorms
- Implemented a flexible slot creation algorithm for each laundry machine
- Created a dummy server capable of keeping track of which slots are booked and which are free

Awards & Competitions

IEEEXtreme 17.0 Competition | *Third Place in the UAE*   October 2023
Top 10% in the Middle East

IEEEXtreme 16.0 Competition | *Fourth Place in the UAE*   October 2022

Leadership & Community Involvement

Habitat For Humanity, Bayt Eidis, Jordan | *Volunteer*   March 2023
Volunteered in Jordan as part of NYUAD's Engineers for Social Impact (EfSI) program to assist in constructing houses and community spaces for the underprivileged families of Bayt Eidis. EfSI emphasizes the value of experiential learning to develop globally relevant, locally sustainable designs by encouraging and enabling interactions among the students and community members

Climbing Wall Supervisor Assistant   August 2022 - June 2023
- Assisted in supervising climbing sessions to ensure the safety of climbers
- Assisted in organizing climbing events and competitions
- Performed weekly equipment maintenance checks

The Gazelle Newsletter | *Illustrator*   September 2022 – December 2022
Illustrated weekly articles for the university newspaper