

Hamza Nouredine

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EDUCATION

Lebanese American University, Beirut, Lebanon
Bachelor of Science in Computer Science

Sep 2022-July 2025

Professional Experience

COG Developers, Data Scientist Intern

Nov 2024-Feb 2025

- Designed **web scraping** solutions for Instagram data collection (posts, comments, stories, highlights)
- Engineered **custom API** simulation with dynamic payloads/headers and Selenium/Beautiful Soup fallback methods
- Deployed scalable monitoring system on A2 Hosting cloud with continuous operation capabilities

CodeBrave Lebanon, Front-End Development Intern

Aug 2023-Dec 2023

- Designed and developed a responsive website for TIS Construction using Figma, WordPress, HTML, CSS, and JavaScript for a user-friendly experience on multiple devices.
- Collaborated with teammates to create visually appealing web content, optimizing website performance and contributing to TIS Construction's successful online presence.

AIESEC Lebanon, Project Facilitator

Feb 2023-Oct 2023

- Successfully conducted training sessions on event planning, delivered leadership presentations, and collaborated with multiple schools to organize an event.

PROJECTS

YouTube Channel Video Scraping Web App

May 2025

- Built a full-stack web application enabling users to input a channel to get Insights about, using **FastAPI** and vanilla JS/HTML/CSS, deployed on Render, Vercel and Integrated a cloud MySQL database using files.io.
- Developed a custom video scraper that programmatically sent HTTP requests to **YouTube's** public endpoints to retrieve the channels and video's metadata. Supported for up to **50 videos** per session, using the continuation token and timestamps to detect new videos.

Waselne Mobile Bus Reservation App

Jan 2025 – May 2025

- Developed a mobile application using **Flutter** for a bilingual (Arabic/English) bus reservation system integrated with a Spring Boot backend.
- Implemented core features including user authentication (**with JWT**), real-time seat booking, admin management tools, and a responsive design supporting multiple devices.
- Designed and tested **RESTful** APIs using Postman, developed database schemas in **MySQL** Workbench, and tested the app on Android Studio's emulator.

Emotion Classification with NLP and Deep Learning

Apr 2025

- Built an emotion detection system using **LSTM**, **RNN**, and **BERT** models to classify text into six emotions: anger, fear, joy, love, sadness, and surprise, achieving up to **93%** test accuracy.
- Fine-tuned the **BERT transformer** model with a learning rate of **2e-5** and optimized batch processing, achieving strong contextual performance.
- Developed a soft-voting ensemble to combine predictions from all models and deployed the system as an interactive Flask web application with live predictions.

COMPUTER SKILLS

Programming Languages: Java, Python, C, SQL, HTML, CSS, JavaScript, PHP

Frameworks & Technologies: FastAPI, Flask, Spring Boot, Flutter, WordPress

Data & Web: Beautiful Soup, Selenium, MySQL, RESTful API Development
Development: Object-Oriented Programming, Git, Postman, MySQL Workbench

SOFT SKILLS

Teamwork, Communication, Organization, Leadership, Problem-Solving, Adaptability, and Flexibility