## IBRAHIM EL KHANSA

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SKILLS

Languages: English (Fluent), Arabic (Native)
Core Programming Skills: JavaScript, TypeScript, SCSS, Python

Frontend/Backend: React, Next.js, Node.js, Flask

Infrastructures: Docker, Supabase, Firebase, MongoDB

**EDUCATION** 

American University of Beirut (AUB)

BE in Computer Science Engineering & Minor in Economics Sep 2020 - May 2025

WORK EXPERIENCE

AUB Research Lab

Beirut, Lebanon

Beirut, Lebanon

Part Time Research Assistant

June 2025 - August 2025

Technologies: React, Next.js, TypeScript

• Conducted computational musicology research focusing on Arabic music theory, collaborating with faculty and researchers to analyze and visualize complex musical concepts including tuning systems, maqamat, ajnas, and their transpositions and modulations

• Led full-stack development to create interactive educational tools and real-time audio synthesis for maqām systems within the Music Intelligence Lab framework

MurexBeirut, LebanonJava Software Development InternJune 2024 - August 2024

Technologies: Java Swing, Jenkins, Maven, Git, QA frameworks

• Enhanced the MX3 platform's Business Process Management module by developing UI components, enabling financial users to add editable descriptions and task comments, which reduced workflow errors and improved operational clarity for major financial institutions worldwide

- Refactored backend systems and database integrations to support new BPM features while maintaining compatibility, and built comprehensive integration tests to ensure software stability
- Delivered scalable solutions through Agile development practices, collaborating with QA engineers, product managers, and architects in daily stand-ups and retrospectives to align technical implementation with user requirements

Fits Consulting

Beirut, Lebanon

 $Digital\ Transformation\ Consultant\ Intern$ 

Technologies: Bizagi, Java

August 2022 - November 2022

- Analyzed client business processes and developed automated workflow solutions, creating admin portals and process models that streamlined operations for multiple client organizations
- Participated in client meetings and requirements gathering sessions to translate business needs into technical specifications for digital transformation initiatives
- Created comprehensive process documentation and flow charts that served as implementation guides for clients transitioning from manual to automated systems

## PROJECTS

Coursis (Link) - A platform that helps students efficiently generate optimal university schedules based on dynamic algorithms, custom data structures, and user preferences, now serving over 15,000 users. Next.js, React, Firebase, advanced algorithms, and advanced data structures

 $\mathbf{H}$ .A.D.I (Link) - A machine learning-powered platform that predicts diseases based on user-reported symptoms.

Python (Flask), TensorFlow, Jupyter Notebook, Docker, React, Next.js, and TypeScript

Portfolime (Link) - A modern web application that transforms CVs into customizable portfolio websites. Next.js, TypeScript, SCSS, Firebase, OpenAI API for resume parsing, and PDF processing libraries

MusicLeb (Link) - A virtual hub for the Lebanese music scene that connects musicians, artists, and fans with a focus on performance optimization and community building, now with over 150 registered artists.

Next.js (CSR, SSR, SSG, ISR), React, TypeScript, and Firebase

Maqam Network (Link) - An educational platform for exploring Arabic music theory, featuring maqamat, ajnas, seyr, tuning systems, and interactive visualizations with dynamic audio playback.

Next.js, React, TypeScript, audio synthesis libraries, and advanced algorithms