

Ibrahim El Khansa
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DESCRIPTION

Creative and skilled Computer and Communications Engineer with a strong foundation in software development and design. Owner and developer of multiple projects with significant user bases, delivering scalable solutions and ensuring high user satisfaction. Proficient in modern frameworks and technologies such as React, Next.js, and Firebase. Skilled at leading teams, working with different groups, and solving problems creatively to deliver effective solutions. Seeking a full-time job that will utilize my technical skills and leadership abilities to work on important projects.

EDUCATION

09/2020 – 06/2024 American University of Beirut (AUB)
Bachelor of Engineering in Computer Science Engineering
• Minor in Economics

WORK EXPERIENCE

06/2024 – 08/2024 Murex
Java Software Development Intern
Beirut, Lebanon
Completed a three-month internship at Murex as a java software developer within the BPM Deimos team
• Refactored legacy code, implemented integration tests, and enhanced user interfaces using Java Swing.
• Collaborated with quality assurance and product architects to ensure robust and scalable financial software.
• Practiced Agile methodologies, participating in stand-ups, sync meetings, and retrospectives.
• Gained expertise in tools like Maven, JUnit, Jenkins, Git, and Murex's proprietary tools.
• Improved programming skills by focusing on clean code, testing, and scalable solutions.

08/2022 – 11/2022 Fits Consulting
Digital Transformation Consultant Intern
Beirut, Lebanon
• Streamlined business processes using Bizagi, making daily operations more efficient.
• Created flowcharts and admin portals for clients using Bizagi and Java.
• Collaborated with teams to ensure software met evolving business needs.
• Delivered solutions that improved operational efficiency and client satisfaction.

09/2021 – 05/2024 American University of Beirut
Coding Tutor
Beirut, Lebanon
• Conducted engaging lectures for Python, C++, and VHDL classes, addressing more than 30 students per session
• Created and shared valuable tutoring materials online to facilitate accessible learning resources for students

INDEPENDENT DEVELOPMENT PORTFOLIO

- 11/2022 - Present** **Coursis (www.coursis.org)**
- Developed *Coursis*, a comprehensive academic platform designed to help students manage schedules and various academic tasks efficiently using Next.js and Firebase
 - Single-handedly designed and implemented both frontend and backend systems, including a dynamic scheduling algorithm to generate optimal, non-conflicting schedules based on user preferences
 - Optimized the platform's performance through custom algorithms and data structures like Graphs, Binary Search Trees, and conflict detection mechanisms to enhance the accuracy of schedule generation
 - Integrated a reservation system allowing students to book classrooms and other resources, with admin control features to manage room availability and user access efficiently
 - Actively maintaining and enhancing *Coursis* to meet the evolving needs of the 10000+ users on the platform while adhering to best practices in security, scalability, and performance
 - For a summary of all technologies, skills, and tech stacks used, click [here](#).
- 10/2024 – 12/2024** **H.A.D.I – Health and Disease Identification (www.hadi-online-doctor.vercel.app)**
- Designed and developed a machine learning-powered platform to predict diseases based on user-reported symptoms.
 - Built a user-friendly React Next.js frontend and a python backend for real-time symptom analysis and seamless interaction.
 - Integrated OpenAI's GPT API to fetch detailed medication data, including types and price ranges, displayed dynamically to users.
 - Deployed the platform using Docker, Vercel, and Fly.io, ensuring scalability, performance, and secure user interactions.
 - Implemented an interactive, Akinator-style diagnostic flow for a more engaging and intuitive user experience.
- 01/2023 - 06/2023** **3azaw2ak Mobile App**
- Developed a cross-platform native app for Android and iOS using React Native and Expo for the frontend and Firebase Services for the backend, ensuring optimal app performance.
 - Implemented a serverless, event-driven backend using Firebase Cloud Functions, enabling efficient data processing, and reducing infrastructure costs.
 - Created a cloud-hosted, real-time database synchronized across all clients using Firebase Realtime Database, ensuring data consistency and offline data access for users
 - Ensured API backend resource protection and user privacy using Firebase Authentication and Firebase App Check, implementing robust authentication and authorization protocols
- 01/2024 – 03/2024** **Farm & Factory Admin Portal/Panel**
- Spearheaded the development of a comprehensive admin portal for managing a farm and dairy business, handling both frontend and backend responsibilities using Next.js and firebase services
 - Singlehandedly engineered a user-friendly interface, ensuring seamless stock, customer, and employee management for my relative who utilizes the site daily
 - Implemented robust database designs and client-side logic to facilitate efficient business operations
- 02/2024 - 02/2024** **Personal Website**
- Designed and launched my own personal website, ibrahimkhansa.com, as a portfolio to showcase my development projects and technical skills.
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UNIVERSITY COURSE PROJECTS

Database Systems (EECE 433)	Farm Management System <ul style="list-style-type: none">• Developed a web-based farm management system using Flask and PostgreSQL, enabling efficient handling of agricultural data including feeds, livestock, and personnel.• Implemented dynamic features for creating, editing, and deleting records, significantly enhancing operational workflows and ensuring high data accuracy within the farm management context.
Software Engineering (EECE 430)	E-commerce Dealership for Cars <ul style="list-style-type: none">• Built a full-stack platform using React, Node.js, and Firebase, allowing users to browse cars, schedule test drives, and manage reservations.• Learned Agile methodology and project management using Jira, applying iterative development and effective team collaboration.
Application Development Lab (EECE 430L)	Exchange Rate System <ul style="list-style-type: none">• Developed a multi-platform system, including a React-based web app, a Python and Flask backend, a JavaFX desktop app, and a Kotlin mobile app for managing currency exchange trades and real-time rates.• Gained experience in multi-platform development and ensuring consistent functionality across web, desktop, and mobile environments.
Java Programming (EECE 332)	Messaging Platform <ul style="list-style-type: none">• Built a locally hosted chat system using Java, with file sharing and real-time messaging.• Incorporated features of Google Drive allowing concurrent file editing and sharing as well as a chat messaging system
Software Architecture (EECE 437)	Instagram to E-commerce Website <ul style="list-style-type: none">• Developed the frontend using React and Node.js to transform Instagram accounts into fully functional e-commerce stores with product details, pricing, and a cart system.• Learned to collaborate with a backend team and deploy the application using Docker, gaining practical experience in team-based development and deployment.
Software Tools Laboratory (EECE 435L)	Backend Web Services <ul style="list-style-type: none">• Designed and implemented modular backend microservices for customer management, sales, inventory, and reviews using Flask, ensuring secure user authentication, role-based access control, and robust data validation.• Deployed the microservices architecture using Docker and Docker Compose, enabling seamless integration and efficient inter-service communication within a scalable and isolated environment.
Communication Systems (EECE 442)	Digital Communication System Simulation <ul style="list-style-type: none">• Developed MATLAB simulations for digital communication processes: sampling, quantization, coding, and modulation.• Analyzed system performance with BER under different noise and channel conditions.

EXTRA CURRICULAR ACTIVITIES

- **AUB Physics Summer Program (07/2019 - 08/2019):** Selected by the American University of Beirut (AUB) from a competitive pool of high school students in Lebanon, I participated in the AUB Physics Summer Program. Over four weeks, I engaged in immersive lectures and hands-on laboratory sessions, deepening my understanding of physics and expanding my academic horizons.
- **YouTube channel (09/2017 - 03/2021):** Grew an engaged audience of 3,000 subscribers and accumulated a total of 1.6 million views by producing and sharing compelling content routinely.
- **Stage Manager for AUB Outdoors (04/2023 - 05/2023):** Served as stage manager taking care of the main acts and coordinating stage preparations, ensuring timely performances and smooth transitions between slots for all performers during the renowned annual event.
- **Metallica tribute concert (08/2023 - 02/2024):** Executed comprehensive project management and performed as the drummer for Aeterna who played the first Metallica tribute show in years at Metro Al Madina, successfully filling the venue with 600 attendees through a strategic marketing and sales campaign.
- **Cabinet Member, AUB Music Club (09/2022 – 06/2025):** Plan and manage events, promote the club, and implement strategies to grow its membership. Collaborated with members to organize engaging activities, enhancing the club's visibility and participation on campus.

AWARDS and RECOGNITIONS

- Won first place in the 2019 *LAU Film Competition* for best film
- Completed the Web Developer Bootcamp course by Colt Steele on Udemy
- Completed the Next.js & React – The Complete Guide by Maximilian Schwarzmüller on Udemy
- Completed Figma UI UX Design Essentials course by Daniel Walter Scott on Udemy

RELEVANT COURSEWORK

Software Courses: Design and Analysis of Algorithms, Object-Oriented and Effective Java Programming, Computing Networks and Services, Theory of Computation, Programming Language Design and Implementation, Cryptography and Network Security, Software Engineering, Database Systems, Software Architecture and Design Fundamentals, Web, Mobile, and Application Development Lab, Machine Learning

Hardware Courses: Computer Organization, Operating Systems

Other Courses: Engineering Entrepreneurship, Communication Systems

SKILLS

Languages: Fluent in English, Arabic and German

Computer Skills: Java, Maven, Jenkins, C++, JavaScript, Typescript, HTML, CSS, React, React Native, Next.js, Docker, Git, Firebase, Python, Microsoft Office, Photoshop, Adobe Premiere Pro, Adobe After Effects, Figma, LaTeX

Soft Skills: Initiative, Management, Research, Leadership, Adaptability, Time Management, Teamwork, Organization

HOBBIES

Drumming 🥁, Electric Guitar, Video Editing