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Beirut, Lebanon

EDUCATION

Lebanese American University, Beirut, Lebanon
BS in Computer Science, Expected Graduation: May 2026
Lebanese Baccalaureate in General Sciences, Graduated: 2023

RELEVANT COURSEWORK

- Algorithms and Data Structures | • Objects and Data Abstraction | • Digital Systems Design
- Database Management | • Software Engineering | • Machine Learning | • Theory of Computation | • Operating Systems

EXPERIENCE

Private Tutor (2023 - Present)

- Tutoring students in Calculus, Discrete Mathematics, Data Structures, and Object-Oriented Programming.

Competitive Programming Training (2023 - Present)

- Participated in competitive programming training sessions to improve problem-solving and algorithmic skills.

PROJECTS

- **AI English Tutor with Real-Time Lip-Synced Avatar**: Developed a real-time AI English learning platform using Python (FastAPI) backend, integrating GroqCloud APIs (GPT-4, Whisper, TTS) for voice and text interaction, with a frontend built using Adobe Animate, HTML5 Canvas, and JavaScript for synchronized avatar lip sync, deployed serverlessly on Vercel.
- **Database Project for Musical Concerts**: Designed and implemented an Oracle SQL database with ER diagrams, relational models, and complex queries, integrated with a GUI for user interaction.
- **Full-Stack School Management System**: Developed a Java Spring Boot backend with PostgreSQL for managing students, teachers, and courses, paired with an HTML, CSS, and JavaScript frontend for a dynamic and user-friendly interface.
- **Full-Stack Computer Store System**: Designed and developed the backend for an online computer store using Java Spring Boot and PostgreSQL, implementing a full relational database schema, layered architecture (Controller-Service-Repository), role-based access control (RBAC), secure authentication, shopping cart system, order management, reviews, returns, and notifications. Produced comprehensive software requirements specification (SRS) and system architecture models, contributing to functional frontend integration via RESTful API endpoints. Tested and validated all backend APIs using Postman to ensure system reliability and correctness.
- **Machine Learning Research**: Co-authored the research paper "Multi-layered UAV Deployment for Object Detection in Fire Area and Survivor Rescue Using Reinforcement Learning" and collaboratively developed machine learning models as part of a research team. Built and trained reinforcement learning models focused on optimizing UAV efficiency, including UAV type selection, dynamic deployment strategies, and resource allocation to enhance fire detection and survivor rescue operations. The paper was authored using LaTeX for professional typesetting and adhered to IEEE publication standards for formatting and technical structure.

- **Computer Organization Project:** Simulated a computer system using LEGv8 assembly language, focusing on CPU, memory, and driver buses.

EXTRACURRICULAR ACTIVITIES

- Member of the "Youth Gathering" in Nabatiyeh, South Lebanon.

WORKSHOPS ATTENDED

- "A Guide to a Career in Machine Learning" by Carl Krikorian (Senior ML Engineer at CME), 2024
- "The Modern Web Development" by Issa Mokdad (Senior Software Engineer at CME Offshore), 2024
- "Beyond the Code: The Unspoken Rules of Software Engineering" by Mohammad Haj Hussein (Senior Software Engineer at CME Offshore), 2024
- "Cybersecurity in Engineering" exploring cybersecurity fundamentals, its impact, and career opportunities in engineering by Mr. Hassan Nahleh (Founder of Youbee.ai), 2024

SKILLS & LANGUAGES

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

Frameworks: Spring Boot

Computer Skills: PowerPoint, Excel, Visio, Word

Languages: Fluent in Arabic and English