

Ali Jammoul

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Summary

Innovative Computer Science student with hands-on experience in AI, machine learning, and real-time computer vision systems. Proven track record building production-ready applications, including trading systems and speech recognition tools. Ranked top 3 in national coding competitions, with strong problem-solving and cross-functional project skills.

Education

Lebanese American University

Sept 2023 – May 2026

BS in Computer Science (Expected May 2026)

- **Coursework:** Object-Oriented Programming, Data Abstraction, Algorithms and Data Structures, Operating Systems, Database Management Systems, Computer Architecture, Machine Learning, Mobile Development, Software Engineering, Machine Learning, Mobile application.

Academic Projects & Research

Vertically Integrated Projects Plus Model

github.com/VIP-Plus 

- Built a real-time computer vision pipeline using YOLO, Faster R-CNN, and RetinaFace to extract passenger flow metrics from video data.
- Designed and trained an XGBoost regression model to forecast gate congestion, enabling dynamic queue optimization and improving throughput efficiency.

BullBeep: Child Speech Monitoring System

Mobile Application

- Developed a mobile app that captures and transcribes child speech using Android's SpeechRecognizer, with identity verification based on Azure-generated speaker embeddings and cosine similarity.
- Applied TensorFlow Lite BERT-tiny models for on-device toxic language detection and mood classification from real-time speech transcriptions.

AI-Driven Trading System

Desktop Application

- Built a trading application using Python Streamlit, employing a three-tier machine learning approach.
- Integrated FinBERT for financial news sentiment analysis, Temporal Fusion Transformer (TFT) for multi-step chart price forecasting, and a reinforcement learning agent to automate trading decisions.

Enhancing Crude Oil Price Forecasting with Hybrid AI Models

Research Paper

- Co-authored a research paper utilizing OW-XGBoost and CrudeBERT to forecast crude oil prices.
- Demonstrated improved predictive performance by fusing technical data with news sentiment analysis.

Coding Experience

Lebanese Collegiate Programming Contest

Dec 2023 - Present

- Enhanced algorithmic thinking and problem-solving skills in a competitive programming setting.
- Achieved 3rd place at the university level and ranked in the top 25 nationally in Lebanon.

Coding Summer Camp

July 2022

- Developed a mobile application using Android Studio, integrating both front-end and back-end components.
- Utilized data from the PVGIS platform to optimize solar panel installation parameters based on user location.

Languages, Software and Extracurricular Activities

Languages: C++, C, Java, SQL, Python.

AI/ML: TensorFlow, PyTorch, Scikit-learn, Hugging Face, XGBoost, YOLO, OpenCV.

Editing Software: Adobe Premiere Pro, DaVinci Resolve, Adobe Photoshop, Lightroom, Canva.

Activities: Boy Scout Leader, Professional Photographer and Videographer, Social Media Manager.