

Karim Abi Aad

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EDUCATION

American University of Science and Technology

Beirut

B.S. in Computer Science

Expected Graduation, June 2026

- o **Concentrations:** AI and Cloud Computing
- o **GPA:** 3.74/4.00
- o **Related Coursework:** Data Structures & Algorithms, Machine Learning, Artificial Intelligence, Object-Oriented Programming, Statistics & Applications, Cloud Computing, Computer Networks

Experience

NetVariant

Beirut

Backend Developer Intern

Mar 2025 - Oct 2025

- Collaborated with senior engineers to architect and implement core backend modules for a custom enterprise e-commerce application using the Moqui Java framework.
- Developed RESTful services handling product catalog, user authentication, shopping cart, and order processing, ensuring high performance and scalability.
- Extended and customized Moqui components to build an interactive, real-time administrative dashboard for analytics and reporting.

4Finance

Virtual

Full-Stack Web Development

May 2026 – Jun 2026

- Developed a full-stack municipality website and content management system (CMS) using React, TypeScript, Node.js, Express.js, MongoDB Atlas, and JWT authentication.
- Designed and implemented RESTful APIs for municipality news, projects, and content management, supporting complete CRUD operations.
- Built secure administrator authentication and role-based authorization using JSON Web Tokens (JWT), protected routes, and middleware-based access control.
- Developed responsive bilingual (Arabic/English) user interfaces with RTL/LTR support, localization, and mobile-first design principles.
- Integrated MongoDB Atlas with Mongoose for scalable cloud-based data persistence, efficient schema design, and content management workflows.
- Collaborated with UI/UX designers to transform Figma designs into production-ready React applications with responsive and accessible user experiences.

Projects

ForenSight (Python, OpenCV, Google Cloud, Vertex AI, Computer Vision, Deep Learning)

Jun 2026

- Developed an AI-powered forensic analysis platform for automated bloodstain pattern classification using computer vision and deep learning techniques.
- Collected, organized, cleaned, and validated forensic image datasets to improve training quality and model performance.
- Built image preprocessing and segmentation pipelines using OpenCV to prepare bloodstain images for classification and analysis.
- Trained and evaluated CNN-based image classification models using Google Vertex AI for bloodstain pattern recognition.

- Designed a scalable dataset architecture supporting hierarchical bloodstain classes and future multi-class expansion.
- Implemented automated prediction workflows with confidence-scored outputs and structured forensic report generation.
- Designed cloud-ready deployment architecture using Google Cloud services to support scalable model training and inference

Finance Tracker Web App (HTML, CSS, Django)

May 2025

- Launched a secure cloud server using AWS EC2, installed and configured Ubuntu, Python, and Django.
- Deployed a Django web application using Gunicorn and Nginx to serve traffic efficiently.
- Registered and configured a custom domain name using AWS Route 53 with DNS records pointing to the EC2 instance.
- Set up SSL certificates and enabled HTTPS using Let's Encrypt, ensuring encrypted and trusted connections.
- Implemented server security best practices, including firewall rules, SSH key access, and automatic certificate renewal.

Stock Predictor(Python, Tensorflow, Keras, Numpy, Scikit-Learn)

Jun 2024

- Engineered an LSTM model to forecast stock prices, boosting accuracy through advanced data preprocessing and architecture optimization.
- Integrated real-time stock data using Alpha Vantage API, enhancing prediction relevance.
- Refined model with hyperparameter tuning, elevating predictive accuracy.

SKILLS

Programming Languages: Java, Python, HTML/CSS, SQL, C++, XML, JQuery, C#, PHP, Java Script

Frameworks/Tools: Android Studio, IntelliJ, Jupyter Notebooks, Visual Studio Code, Microsoft Access, JSP, Eclipse, SSMS, MySQL, Linux(Ubuntu), Keras, Numpy, Scikit-Learn, Tensorflow, AWS, Postman, Swagger, Moqui, Node.js, React.js, MongoDB, TailWind CSS, Express.js, OpenCV, Google VertexAI