

Sari Itani

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Summary

AI Engineer with specialization in neuromorphic computing, statistical learning and computer vision. 3+ years of experience in research and freelance deploying efficient, real-time systems. Proficient in PyTorch, Tensorflow, Keras, C++ and Python in edge computing and embedded system design.

Education

Bachelor of Engineering in Computer Engineering <i>C++, Python, ML, DL, R&D, Engineering Design</i> GPA: 3.79/4.0 (Ranked 1st on Dean's Honor List, Fall 2024, SGPA 3.97/4.0)	Beirut Arab University Sep 2021 - June 2025
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Projects

X-Ray Classification on Edge Devices using Knowledge Distillation <i>PyTorch, DenseNet121, MobileNetV2, Knowledge Distillation, Model Optimization, Edge AI</i> <ul style="list-style-type: none">Compressed a DenseNet121 teacher into a MobileNetV2 student model for chest X-ray classification.Distilled DenseNet121 into a lightweight MobileNetV2 with minimal accuracy loss -1.2% but is $7.5\times$ faster at inference and has a 85% smaller model size, optimized for real-time chest X-ray images on edge hardware.	June 2025 - July 2025
Real-Time Food Detection System on Raspberry Pi for SmartFridge <i>Python, YOLO, Raspberry Pi, Bash, Flask, OpenCV, Embedded Deployment</i> <ul style="list-style-type: none">Led the full-stack development of an automated food tracking system in a team of three, from AI model selection to embedded hardware integration and backend development.Fine-tuned YOLOv8 models on food datasets, achieving 88% mAP50 for real-time food object detection, and deployed the model on a Raspberry Pi for continuous image capture and processing.	July 2025 - Present

Experience

AI Research Assistant, American University of Beirut <i>R&D, PyTorch, TensorFlow, Python, Research Methods, Medical Imaging, CNNs</i> <ul style="list-style-type: none">Indulged in 10+ team-based vertical research projects, currently on CNV detection with computer vision.Conducted weekly agenda-based tasks aligning with the mission and vision of the research team, aligning with potential publication venues.Focused on organizing literature readings, research findings, and code for vision models in an integrated team-based approach, ensuring that future iterations can further be developed across prospective verticals.	July 2025 - Present
AI Research Assistant, Beirut Arab University <i>R&D, PyTorch, TensorFlow, Python, REST APIs, OpenCV, System Integration, Scikit-Learn</i> <ul style="list-style-type: none">Conducted research on a variety of topics, focusing on Embedded AI and Neuromorphic Computing.Published seven research papers with more papers soon expected to be published in the AI field.	Sep 2022 - July 2025
Freelance AI & Machine Learning Engineer <i>Python, C++, PyTorch, TensorFlow, OpenCV, YOLO, AWS/GCP, Git, REST APIs, Linux, Bash</i> <ul style="list-style-type: none">Developed and deployed deep learning models for classification, object detection and segmentation tasks.Built and optimized end-to-end ML pipelines for various clients, focusing on accuracy and efficiency.Consulted business owners regarding dataset choice, system integration design, and optimization potential.	Aug 2022 - May 2025

Publications

• BMC-DA: A Neuromorphic Computing Architecture for Data Driven AI Modeling	(Under Review)
• RDDA: Rectified Discriminatory Delta-Adjust	8 Dec 2025
• Delta-Adjust: Minimum Distance Interpolation	6 Aug 2025
• Cropsync: AI-Powered Sustainable Crop Management	30 Dec 2024