

MOHAMAD MERI

Software Engineer

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EXPERIENCE

Independent Consultant – Data Analytics & Business Intelligence

2025 - Present

Freelance *California, USA (Remote)*

- Led consulting engagement for a plastics manufacturer, conducting comprehensive analysis of resin substitution events to uncover cost and efficiency drivers.
- Built automated data pipelines in Python using Pandas and NumPy to transform messy Excel reports into validated datasets supporting executive decision making.
- Developed interactive dashboards using Plotly and delivered comprehensive decision support reports, giving leadership real-time visibility into operations, improving transparency, reducing waste, and guiding process improvements.

Developer (2022–2024) & IT Support Technician (2021–2022)

2021 - 2024

Travelbook Holidays *Beirut, Lebanon*

- Implemented booking workflow modules, affiliate tracking features, and optimized booking flows to improve reliability for daily agency operations.
- Contributed to an internal flight booking and customer management system using Flask (Python).
- Provided technical troubleshooting, system administration, and basic automation for recurring tasks.

PROJECTS

Styx: Full-Stack Workout Tracker (In Development)

- Built a Flask web app with relational database backend for workout tracking.
- Added automated testing (Pytest, Hypothesis) and CI/CD (GitHub Actions) for code reliability.

Artist Identification via Deep Learning

- Developed a high-performance deep learning model for artist classification by utilizing transfer learning and fine-tuning CNN architectures with PyTorch and fast.ai.
- Engineered a data pipeline with under-sampling to address class imbalance and conducted error analysis via confusion matrices to improve model fairness and interpretability.

GPU-Accelerated Neural Network

- Engineered an optimized, GPU-accelerated neural network in C++/CUDA by converting a sequential CPU implementation into a high-performance parallel application.
- Benchmarked multiple parallelization techniques and memory optimizations, achieving significant speedups by identifying memory as the core bottleneck and implementing a shared memory approach.

Alexa-Integrated Business Intelligence System

- Created a voice-enabled BI tool with Alexa and Python to query and display business data.
- Integrated AWS Lambda and S3 for serverless processing and data storage, with results displayed on Raspberry Pi devices.

EDUCATION

Bachelor of Science in Computer Science

2016 - 2020

American University of Beirut *Beirut, Lebanon*

SKILLS

Languages	Python, Java, SQL, HTML/CSS, C++ (intermediate)
Frameworks	Flask, PyTorch, pandas, NumPy, scikit-learn, NLTK, Plotly, Pytest
Tools	Git/GitHub, AWS, Google Cloud Platform, CI/CD, CUDA, Excel