Tia Charaf
tac04@mail.aub.edu | +961 70998399 | LinkedIn| GitHub

Education

American University of Beirut, BEIRUT, LEBANON	Sep 2023 - July 2024
B.S in Computer Science	
American University of Beirut, BEIRUT, LEBANON	Sep 2021 - May 2024
B.S in Physics	
Amjad High School, BEIRUT, LEBANON	Nov 2005 – June 2020
Lebanese Baccalaureate in General Science	Graduated with High Honors	

Professional Experience

SIREN ANALYTICS, BEIRUT, LEBANON	May 2025 – July 2025

Data analytics and AI consulting company providing advanced analytical solutions for businesses.
AI Engineer
- Developed and implemented AI solutions for client projects to generate word documents, powerpoints, and proposals for consultants.
- Collaborated with cross-functional teams to deliver projects.

MINA, BEIRUT, LEBANON	Nov 2024 – Jan 2025

AI startup focused on personalized language learning solutions using emerging AI technologies.
Machine Learning Intern
- Conducted comprehensive research on the Japanese Language Proficiency Test and emerging AI technologies to help personalize practice exams for each user
- Explored computational methodologies and AI solutions to identify promising pathways for personalized learning experiences

Projects

- **Higgs Boson Classifier**

Developed and optimized machine learning models using **Bayesian** searching for hyperparameter tuning to classify particle collisions as Higgs boson or non-Higgs boson based on kinematic features
- **2-D Ising Model**

Implemented in Python using Monte Carlo algorithms to study spin systems and analyzed phase transitions and temperature-dependent behaviors
- **Nonlinear 6 DOF**

Aircraft Dynamics: Explored fundamental principles of aircraft dynamics analyzing how physical forces interact to enable controlled flight
- **Spell Master Game:**

Developed a CLI game in C featuring 2-player and bot modes with different difficulty levels and strategic word/spell selection for victory.
- **Simple RAG System:**

Developed a Chatbot interface that embeds the text content of the CLRS textbook, uses Chroma Vector Database to store embeddings and do similarity search.And Retrieves the answer to the query of the user.

Other Experience

Telnet, BEIRUT, LEBANON
Telecommunications and data management company providing enterprise solutions.
Data Entry Intern
• Executed precise data entry tasks, ensuring accuracy and completeness in account management systems.
• Proficiently navigated internal tools and systems to streamline data entry and account maintenance processes.

Easy Game Tutoring, BEIRUT, LEBANON
Online tutoring platform providing personalized academic support across various subjects.
Online Tutor
• Delivered personalized tutoring sessions to students across multiple subjects including mathematics, physics, and programming.
• Developed customized learning materials and strategies to improve student performance and comprehension.

Technical Skills

Tools & Languages: *Python, Java, Julia, C, C++, C#, SQL, Git, Unity, Linux*
Packages: *Tensorflow, Scikit-Learn, NumPy, SciPy, Pandas, Matplotlib, Statsmodels, Jupyter Notebook*
Machine Learning: *Statistical Analysis, Linear/Logistic Regression, Clustering, Regularisations, Neural Networks, Bayesian Optimizations, Hyperparameter Tuning*

Languages & Additional Information

• Arabic: Native, English: Fluent
• Technology: Proficient in Windows and Linux operating systems, experienced with version control systems and collaborative development environments.
• Interests: Physics research, AI/ML development, game development, computational modeling, and aircraft dynamics simulation.