

GEORGES KHATER

Beirut, Lebanon

✉ georges@khater.co [in](#) [LinkedIn](#) [G](#) [GitHub](#)

Education

American University of Beirut (AUB)

Sep 2023 – Jun 2028

B.E. in Computer Science & Engineering, B.S. in Mathematics GPA: 4.20/4.30

Beirut, Lebanon

- **Selected Coursework:** Advanced Calculus, Algorithmic Graph Theory (grad), Machine Learning, Commutative Algebra (grad), Algebraic Topology (grad)
- **Guided Independent Study:** Probability, Combinatorial Optimization, and Market Matching.

Publications & Preprints

- Louay Bazzi and **Georges Khater**. *Hardness of Approximation for Minimum-Weight Decoding of Two-Dimensional Topological Quantum Codes*. arXiv:2608.17109, 2026.

Research Experience

Economic Design Fellow, Market Matching

Nov 2025 – Present

Prof. Scott Duke Kominers, Harvard University

Remote

- Conducting research on stochastic matching markets, with a focus on fairness constraints and dynamically changing compatibility structures.
- Analyzing feasibility and stability using tools from combinatorial optimization, probability, and matching theory.

Undergraduate Research Assistant, Quantum Error Correction

Sep 2025 – Aug 2026

Prof. Louay Bazzi, Electrical & Computer Engineering, AUB

Beirut, Lebanon

- Studied the computational complexity and approximability of minimum-weight decoding for two-dimensional topological quantum codes.
- Proved additive inapproximability gaps of $\Omega(N^{1/14})$ for toric and 4.8.8 color codes and $\Omega(N^{1/18})$ for planar surface codes, assuming $P \neq NP$.
- Developed faster algorithms for Separate Minimum-Weight decoding of the toric code, building on matching-based formulations and recent subcubic decoding methods.

Additional Experience

Quantitative Research and Engineering Intern

Jun 2026 – Aug 2026

Edgebot

Beirut, Lebanon

- Researched and backtested quantitative approaches to trading prediction markets, developing empirical experiments to evaluate strategy ideas on historical data.
- Designed and benchmarked agentic frameworks for quantitative research tasks, with a focus on automating research and strategy-evaluation workflows.
- Optimized the main backtesting engine using algorithmic and systems-level techniques, achieving a $4\times$ average speedup and up to $15\times$ on selected workloads.

Awards & Honors

- **Muhanna Foundation in Mathematics Award of Excellence (2026)**, one of two recipients of AUB's annual award recognizing outstanding senior Lebanese students in mathematics.
- **1st Place, Lebanese Collegiate Programming Competition (2025)**.
- **AUB Presidential Scholarship (2023–2027)**, awarded to 10 students across graduate and undergraduate applicants.

Teaching Experience

Teaching Assistant, EECE 331: Design and Analysis of Algorithms

Aug 2025 – Dec 2025

American University of Beirut

Beirut, Lebanon

- Led weekly recitations and office hours for a ~100-student algorithms course, focusing on design techniques, graph algorithms, and complexity analysis.
- Guided students through assignments on graph algorithms, dynamic programming, and hardness proofs.

Math Tutor

Aug 2024 – Dec 2024

AUB Math Tutoring Center

Beirut, Lebanon

- Tutored Calculus, Statistics, and Linear Algebra in group and one-on-one settings.