# Hadi Khalaf

## **Education**

**Harvard University** Cambridge, MA

Ph.D. in Computer Science, GPA: 4.0/4.0

2024 - Expected 2029

Advisor: Prof. Flavio du Pin Calmon

- Designing provably robust and scalable tools for AI deployment and evaluation
- · Coursework: information theory, high-dimensional learning, nonasymptotic statistics (MIT), nonlinear optimization (MIT)

#### **American University of Beirut**

Beirut, Lebanon

BS in Statistics, Minor in Economics, GPA: 4.18/4.0

2020 - 2024

BE in Electrical & Computer Engineering, GPA: 4.19/4.0

• Final Year Project: Developed the first GPT-powered tool to crowdsource and query geospatial data, now deployed over WhatsApp at the Beirut Urban Lab

### **Publications**

Inference-Time Reward Hacking of Large Language Models (ICML Models of Human Feedback for AI Alignment, 2025) H. Khalaf, C.M. Verdun, A. Oesterling, H. Lakkaraju, F.P. Calmon

AI Alignment at Your Discretion (ACM Conference on Fairness, Accountability, and Transparency, 2025)

M. Buyl, H. Khalaf\*, C.M. Verdun, L.M. Paes, C.C.V. Machado, F.P. Calmon

🏆 Best Paper at the New England Natural Language Processing Workshop 2025 (1/91 papers)

## **Research Experience**

### **American University of Beirut**

Beirut, Lebanon

Research Assistant, Supervised by Prof. Ibrahim Abou-Faycal

02/2023 - 05/2024

- Formulated an implicit solution for the information bottleneck problem with non-Gaussian distributions
- Tested new notions of correlation measures for heavy-tailed stochastic processes

Harvard University Cambridge, MA

Research Fellow at the Economics Department, Supervised by Prof. Elie Tamer

06/2023 - 09/2023

- Helped develop the first Bayesian partial identification algorithms for binary games
- Created a software package to solve binary two-player games in under-specified economic setups

## **Work Experience**

### **Electrical and Computer Engineering Department at AUB**

Beirut, Lebanon

Head Teaching Assistant and Course Manager

09/2021 - 05/2024

- · Led a team of 15 TAs, managed all course logistics, and designed supplemental notes in Data Structures and Algorithms
- Helped reduce TA hours by 40% by automating assignment grading using LLMs in Intro to Programming

## Awards, Honors, and Scholarships

### ICML Hudson River Trading Travel Award

2025

### Harvard Graduate Prize Fellowship

2024-2029

Awarded to select incoming students across Harvard Graduate School of Arts and Sciences

## AUB Penrose Award in the Faculty of Engineering and Architecture

2024

Awarded to the most outstanding graduating student on the basis of scholarship, character, and leadership ( $\sim 0.2\%$  acceptance)

### Qatar Scholarship - Education Above All Program Scholarship

2022-2024

Awarded to the top 10% of students in every faculty based on academic merit

#### **AUB Presidential Scholarship**

2020-2024

Full four-year scholarship awarded to the top six incoming students to AUB based on merit ( $\sim 0.4\%$  acceptance)

#### Research Science Institute Fellow at MIT

2019

Hosted as a researcher in the Nuclear Science and Engineering department at MIT ( $\sim 3.3\%$  acceptance)

### Nationwide Winner in the Lebanese Physics Olympiad

2018

Ranked first over all 11th graders in Lebanon, could not compete at IPhO due to lack of governmental funding