

ANWAR KHADDAJ

+1 832-640-7916 | anwar.khaddage@gmail.com | [LinkedIn](#) | [GitHub](#) | [Website](#) | Houston, TX 77004

EDUCATION

Rice University, School of Engineering, Computational Applied Math and Operations Research Department (CMOR) Houston, TX
MA in Computational and Applied Mathematics, GPA: 4.00/4.00 (Fully Funded) **December 2024**
Lebanese American University, School of Arts and Sciences Beirut, Lebanon
BS in Mathematics with a minor in Computer Science, GPA: 3.97/4.00 (Full Merit Scholarship) **May 2022**
Relevant Coursework: Algorithms and Data Structures, Database Management Systems, High Performance Computing.

SKILLS & LANGUAGES

Programming Languages: Python, MATLAB, Java, C++ (OpenMP, MPI, CUDA), Julia, SQL, HTML, PHP.

Python Libraries: NumPy, SciPy, Matplotlib, Pandas, JAX, Scikit-learn, TensorFlow, Keras.

Software: Git, Pyomo, IPOPT, Bash, LaTeX.

Languages: Bilingual - Fluent in English and Arabic; Basic in German and French.

RELEVANT EXPERIENCE

Graduate Research Assistant - CMOR Department, Rice University - *Houston, TX* **May 2023 - Present**

- Analyze **non-linear optimization** problems for **large-scale** neuron models in collaboration with Baylor College of Medicine.
- Developed a **Python software** to solve **parameter estimation** problems incorporating **automatic differentiation** techniques and **post-optimality analysis** achieving **20% computational speedup**.
- Trained** a postdoc at Baylor College of Medicine on use of software and **presented** findings at SIAM TX-LA conference.

Co-Founder and CTO - Stoodie - *Beirut, Lebanon* **February 2022 - Present**
A job shadowing platform helping high school students find their suitable career path by connecting them with professionals.

- Collaborated with a **web developer** to design **job shadowing processes** and utilize the front-end tailored to students' needs.
- Matched a cohort of **8 students** with different professionals at an **AI education** company.
- Received **\$2K in seed-funding** from UNICEF Lebanon and Kingdom of Netherlands, and won **Jury's choice award** by Injaz Lebanon and LAU hackathon for excellence in **business pitch** and entrepreneurial strategy.

Outreach Director - Graduate Student Association, Rice University - *Houston, TX* **May 2023 - May 2024**

- Collaborated with the **Office of International Students and Scholars (OISS)** to address **graduate student issues** through multiple campus-wide programs and coffee chats.
- Directed the International Buddy Program (IBP), **leading a team of 28 volunteers** to provide essential support and resources to **around 204** incoming international graduate students prior and during graduate orientation.

RELEVANT PROJECTS

Reduced Order Modeling of Heat Equation, Rice University - *Houston, TX* **April 2024**

- Applied **model order reduction** techniques such as **Loewner and Hankel** frameworks to heat equations using **MATLAB**.
- Investigated different approximations of the impulse response of **heat equations** with both diffusion and advection.

Vaccination Center Website, Lebanese American University - *Beirut, Lebanon* **April 2021**

- Developed a website using **PHP**, enabling patient registration for vaccinations and information access to doctors and nurses.
- Enhanced the efficiency of the center operations by integrating **robust functionalities** and user-friendly interfaces.
- Implemented a **database** system with an entity relationship (ER) diagram using **MySQL** for all entities at the center.

LEADERSHIP EXPERIENCE:

Curator - TEDx Club - *Houston, TX* **September 2022 – December 2022**

- Coached speakers** from Shell and Rice University through multiple drafts and rehearsals to refine their **TEDx talks**.
- Ensured all talks aligned with the event's theme and met **TEDx content guidelines** and other deadlines by TEDx organizers.

AI Hackathon Trainer and Coding Instructor - Geek Express - *Beirut, Lebanon* **September 2021 – July 2022**

- Mentored 20 students** on different **AI projects** aimed at solving **climate issues** in collaboration with UAE ministry of climate change and environment.

ADDITIONAL EXPERIENCE: **Grader** - Rice University (*Aug 2022 – Present*); **Treasurer** - SIAM Club (*Sep 2023-Present*); **Coachee** - Doerr Institute for New Leaders (*Feb 2023 - Apr 2023*); **Calculus Teaching Assistant** - Lebanese American University (*Jan 2022 - May 2022*); **President** - Mathematics Club (*Sep 2021-May 2022*); **University Ambassador** - Beirut AI (*Nov 2021*).

RELEVANT HONORS AND AWARDS

Recognition Award, School of Arts and Sciences, Lebanese American University **May 2022**
Hackathon Winner, Fouad Makhzoumi Innovation Center **February 2022**
Top 2 Young Leader, Saradar Bank and ESA Business School **September 2021**