

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: 3.90/4.00 (Fully Funded) August 2022 - 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 EXPERIENCE

Graduate Research Assistant/Software Engineer - 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**.
- Won **Outstanding Poster Award** out of around **65 posters** at SIAM TX-LA conference in Baylor University.
- Developed a **Python software** to solve **parameter estimation** problems incorporating **automatic differentiation** techniques and **post-optimality analysis** achieving over **20% computational speedup**.
- Trained** a postdoc at Baylor College of Medicine on use of software and mentored **3 undergraduates** by developing a series of presentations on **collocation** methods and use of Pyomo software.

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 front-end tailored to **100+ surveyed** students.
- 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 2 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 3 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: Engineering Communication Coach- Rice Activate Program (Aug 2024-Present), **Treasurer** - SIAM Club (*Sep 2023-Present*), **Grader** - Rice University (*Aug 2022 – Present*); **President** - Mathematics Club (*Sep 2021-May 2022*)

RELEVANT HONORS AND AWARDS

Outstanding Poster Award, SIAM TX-LA conference October 2024
Top 50 Global Student Prize (11000 applications and 176 countries), Chegg and Varkey Foundation July 2024
Recognition Award, School of Arts and Sciences, Lebanese American University May 2022

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.