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 Fellowship)   **August 2022 - August 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)   **August 2019 - May 2022**
Relevant Coursework: Algorithms and Data Structures, Database Management Systems, High Performance Computing.

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 enhancing the efficiency of vaccination operations through the integration of robust functionalities and user-friendly interfaces.
- Implemented a database system with an entity relationship (ER) diagram using MySQL, optimizing data management for all entities at the vaccination center.

RELEVANT EXPERIENCE

Graduate Research Assistant - **CMOR Department**, Rice University - *Houston, TX*   **May 2023 - Present**
- Studying non-linear optimization problems for large-scale biophysical neuron models.
- Developed a Python software to solve parameter estimation problems incorporating automatic differentiation techniques and post-optimality analysis.
- Trained a postdoc at Baylor College of Medicine on my software and presented my findings at SIAM TX-LA conference.

Outreach Director - **Office of International Students and Scholars** (OISS), Rice University - *Houston, TX*   **May 2023 - Present**
- Facilitated a working relationship between the Graduate Student Association and OISS for graduate student issues.
- Directed the International Buddy Program (IBP), leading a team of 28 volunteers to provide essential support and resources to incoming international graduate students prior and during graduate orientation.

Co-Founder and CTO - **Stoodie** - *Beirut, Lebanon*   **February 2022 - Present**
- Collaborated with a web developer to build a job shadowing platform for students to find job shadowing opportunities.
- Matched a cohort of 8 students with different professionals at an AI education company.
- Received seed-funding by 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.

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 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**

LEADERSHIP EXPERIENCE:

Curator - TEDx Club - *Houston, TX*   **September 2022 – December 2022**
- Coached speakers from Shell and Rice University, guiding them through multiple drafts and rehearsals to refine their TEDx talks and enhance their body language.
- 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 aiming to solve 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)*