Arush Adabala

Phone: (214) 500-9028 • Email: arushadabalar@gmail.com. Address: Houston,Tx
https://www.linkedin.com/in/arush-adabala-8381a91a6

EDUCATION

Rice University, College of Engineering, Houston TX **Expected Graduation: December 2026**
B.S. Computer Science, B.S. Operations Research **GPA: 3.82**

Selected Coursework:
Completed: Data Structure and Algorithms (COMP 182), Linear Algebra (MATH 355), Multivariable Calculus (MATH 212), Reasoning About Algorithms (COMP 382), Probability & Statistics (STAT 310), Stochastic Modelling (CMOR 350), Graph Theory (CMOR 404), Simulations of Stochastic Models, (CMOR 451), Introduction to Operations Research (CMOR 360), Probabalistic Algorithms (COMP 480), Large Scale Optimization (CMOR 442), Artificial Intelligence (Comp 440)

WORK EXPERIENCE

Rice University – Research Assistant **August 2025 - Present**
Working with Professor Arlei Silva in Rice University. Researching fairness in Graph Neural Networks, showing that common dyadic fairness metrics (e.g., demographic parity) fail to capture ranking biases typical in recommender-style deployments. Designing a ranking-based fairness metric and a model-agnostic post-processing re-ranking algorithm for nod classification that improves group exposure fairness while preserving practical utility.

Amazon – Software Development Engineer **March 2025 - August 2025**
Developed a math assistant for Next Gen Kindle Scribe devices. Used the MyScript API to recognize handwritten equations on an eink display. Developed a segmentation Model to separate user equations and track variables across equations. Stored equations and strokes in a graph and used a union find approach to optimize recognition and equation solving. Automatically converted results to a latex format and rendered them on the eink display. Return offer (May 2026)

MD Anderson Cancer Center – Research Assistant **March 2024 - May 2025**
Working in the Shang Laboratory to develop CoCoNet, an open-source software that uses gene co-expression networks to identify relevance of certain tissues in diseases. Used Python and R to develop an algorithm that uses a Covariance Regression Network model to express gene level effect measurements as a function of tissue-specific co-expression adjacency matrices. Used a composite likelihood estimator to rank tissues in order of relevance to certain disease traits. Vastly improved runtime efficiency by creating a Minimum Spanning Tree of the co-expression network to identify the hubs of the network in order to reduce the number of candidate genes.

Ericsson – Software Development Engineering Intern **May 2024 – Aug 2024**
Working in their Cloud Software & Services Group to develop a Retrieval-Augmented Generation model that would allow teams to upload client documentation and ask the model project specific questions during software development. The model analyzes Jira tickets in real time to perform end to end hyper-tuning of the model. Used Python, SQL, and Gemma-7b to create document embeddings, store them in a database, query the database for relevant document chunks, and generate user-friendly output. Used React and Tailwind to create a front-end for users to seamlessly upload documents and query the model. The product is expected to increase software development efficiency by 25% and reduce human errors by 35%.

Rice University – Teaching Assistant **Fall 2024**
Teaching Assistant for Data Structures and Algorithms course (COMP 382) in the Fall of 2024.

Personal Projects

Eclipse Rocketry - Auto-Recovery Subteam – Team Lead **August 2022 - Present**
Designed and built an algorithm to allow a payload to autonomously detach itself from a rocket and navigate to a specific GPS location on earth after the rocket reaches 10,000 feet into the air. Used a Raspberry Pi Micro Computer to connect to a GPS unit, an IMU (Inertial Measurement Unit), and Servo motors to allow for autonomous navigation of the payload to its intended destination aided by the algorithm.

LANGUAGES AND SKILLS

Skills: Python, Java, C, C++, React, Tailwind, JavaScript, HTML, CSS, PHP, SQL, MySql, MongoDB, Azure, AWS, UNIX, Rust, R, MATLAB, Machine Learning, Artificial Intelligence, Data Analytics