

# Ayman Charania

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## EDUCATION

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- Rice University** Houston, TX  
*Bachelor of Science in Computer Science, minor in Data Science; GPA: 3.96* *Aug. 2022 – May 2025*

## EXPERIENCE

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- Rice Recreation Center** Houston, TX  
*Intramural Supervisor* *October 2022 - Present*
  - Supervised intramural sports like basketball, football, and softball, ensuring fair play, safety, and adherence to up-to-date league policies and procedures
  - Collaborated with officials and staff members to organize successful events while promoting a culture of inclusivity, sportsmanship, and teamwork
  - Maintained comprehensive knowledge of various sports, their rules, and actively stayed informed about any updates to league guidelines
- Rice Data Exploration and Experiential Projects (DEEP)** Houston, TX  
*Member* *August 2023 - Present*
  - Engaged in a semester-long initiative where I collaborated on data-driven projects, leveraging real-world datasets to draw meaningful conclusions and address real-life challenges
  - Benefited from one-on-one mentorship throughout the data science pipeline, enhancing both theoretical understanding and practical coding proficiency in data science methodologies.
  - Acquired comprehensive data science skills by conceptualizing, analyzing, and executing a data-driven project, culminating in a showcase-worthy deliverable demonstrating both technical acumen and teamwork.
- Sunshine Stores Inc.** Beaumont, TX  
*Accounting Intern* *March 2021 - August 2022*
  - Managed and input daily transaction records across all branches, overseeing reconciliation of debits and credits to validate financial data integrity, and addressing discrepancies
  - Coordinated the balance of purchases and expenses, delivering monthly financial summaries to senior accountants to evaluate store performances
  - Administered the comprehensive payroll process, from verifying hours worked and processing adjustments to ensuring timely salary disbursement for all employees

## PROJECTS

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- Spot It Game using Projective Geometry** Houston, TX  
*Game Developer* *February 2023*
  - Utilized principles of projective geometry and finite fields to develop an algorithm for generating unique points in the projective space, enriching the game's mathematical foundation and facilitating distinct game card creation
  - Seamlessly integrated robust mathematical logic with a user-friendly interface, offering an immersive gaming experience that blends education with entertainment
- Stock Market Prediction Using Markov Chains** Houston, TX  
*Algorithmic Developer* *March 2023*
  - Developed a predictive model using Markov chains to forecast stock prices based on historical market data patterns and transitions, ensuring accuracy with the mean squared error metric
  - Performed extensive testing on a variety of stock symbols to assess the model's scalability and consistency across different market scenarios
- Map Search using BFS, DFS, and A\* Search** Houston, TX  
*Algorithmic Developer* *April 2023*
  - Implemented BFS, DFS, and A\* search algorithms, and designed custom Queue and Stack classes, enhancing map traversal and ensuring efficient pathfinding
  - Optimized the A\* search algorithm by incorporating edge costs and straight-line heuristic distances for rapid, optimal route detection in complex map layouts

## PROGRAMMING SKILLS

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- Languages:** Python, Java, JavaScript CSS, HTML  
**Technologies:** React, Pandas, Git, Excel, PowerPoint, Word, L<sup>A</sup>T<sub>E</sub>X