

# Jacob A. Morgan

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## EDUCATION

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### Rice University

Houston, TX

Major: Bachelor of Science, Civil Engineering

Expected Graduation: May 2023

Certificate: Engineering Leadership

Expected Completion: May 2023

**Honors/Awards:** Represented Rice at National Character and Leadership Symposium 2020 at U.S. Air Force Academy, Society of American Military Engineers (SAME) Fort Worth Post Merit Scholarship Winner 2019, 2020, 2021

**Relevant Coursework:** General Chemistry and Physics, Calculus, Differential Equations, Linear Algebra, Probability and Statistics, Engineering Design and Communication, Environmental Engineering, Statics and Dynamics, Mechanics of Solids, Ethics, Structural Analysis/Modeling, Sustainable Design, Engineering Leadership, Project Management

## SKILLS AND ABILITIES

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**Software:** MicroStation, AutoCAD, SolidWorks, MATLAB, SAP2000, Office 365, Google Suite, Zoom

**Soft Skills:** Leadership, problem solving, technical communication, public speaking, time management, organization

**Languages:** English, Spanish (conversational)

## WORK EXPERIENCE

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### Public Works Intern

Fort Worth, TX

*Halff Associates, Inc.*

May 2021 – Aug 2021

- Performed production tasks in MicroStation including profiling, labeling, plan sheet design, and quantity calculation
- Conducted five pre-construction reference checks on project contractors via phone interviews
- Reviewed numerous pre-construction submittals using TxDOT, TMUTCD, and NCTCOG standards
- Reviewed and revised four project plan sets for the project manager before internal and client submissions

### Leadership Coach/Teaching Assistant

Houston, TX

*Rice Center for Engineering Leadership (RCEL), Rice University*

Aug 2020 – Dec 2020

- Coordinated and facilitated seven biweekly, hybrid online/in-person labs for the 25 students in the class
- Guided my team of five students through each in-class lab activity and their use of leadership journals
- Evaluated the students after each lab and provided feedback through a team debrief

## RELEVANT PROJECTS

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### Nicaraguan Low Water Bridge for Engineers Without Borders (EWB)

Houston, TX

*Engineers Without Borders, Oshman Engineering Design Kitchen, Rice University*

Aug 2021 – Present

- Designing and modeling a low water bridge for a Nicaraguan village using AutoCAD and SolidWorks
- Collaborating in a multidisciplinary team and mentoring underclassmen

### PFAS Destruction Reactor for 2021 WERC Environmental Design Contest

Houston, TX

*Team "PFAS and PFurious", Wong Group, Rice University*

Nov 2020 - May 2021

- Designed, fabricated, tested, and presented a bench-scale PFAS destruction reactor to destroy PFAS in drinking water
- Won first place in the competition's PFAS destruction task and coauthored the team's published report in IEEE Xplore
- Implemented and scaled up novel PFAS destruction technique

### Disability-Friendly Archery Bow Stand for Freshman Engineering Design Class

Houston, TX

*Oshman Engineering Design Kitchen, Rice University*

Aug 2019 – Dec 2019

- Designed, fabricated, and delivered an adjustable archery stand to our client, Camp for All 2U
- Authored nine technical memos with my three teammates outlining our progress through the engineering design process
- Expanded individual and group presentation skills through oral presentations to classmates, professors, and client