

Jacob A. Morgan

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EDUCATION

Rice University

Houston, TX

Bachelor of Science, Civil Engineering

Expected Graduation: May 2023

Certificate: Engineering Leadership

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: 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

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

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 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

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 three teammates outlining our progress through the engineering design process
- Expanded individual and group presentation skills through oral presentations to classmates, professors, and client