

Jorge Mendoza

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Education

Vanderbilt University, Nashville, TN

May 2027

Bachelor of Engineering: Civil Engineering; **Minor:** Engineering Management; Clark Scholar

Completed Coursework: Calculus I & II, Multivariable Calculus, Java

Current Coursework: Static, Technology Strategies, Data Science with Python, Sustainability Design in CE, Physics I

Spring Coursework: Dynamics, Mechanics of Material, Thermodynamics, Transportation Systems, ENGM 2440

Skill

Software: AutoCAD, QGIS, Fusion 360, pgAdmin 4 Database, Microsoft: Word, Excel, PowerPoint, and Office

Programming: Python and Java

Languages: English and Spanish

Workplace: Management, Organization, Data Science, Teamwork, and Communication

Professional Experience

Institute for Software Integrated Systems, Nashville, TN

Research Intern

May 2024 - August 2024

- Develop a prototype of Knoxville Traffic Interactive map to visualize traffic data that allows you to see traffic in specific hours, zoom in to see specific lanes traffic, and display information of lanes by hovering mouse over the lane.
- The end of my internship I made a presentation to showcase my prototype and progress
- Technical skills develop: QGIS, pgAdmin 4 database, and Python.

Engineering Projects

Fest Engineering Design Challenge

July 2023

- The challenge is to design an engineering solution to a global problem with a team. We chose to tackle overfill trash cans and sorting materials for recycling
- We design a trash bin to automatically sort waste into designed containers, and use sounds sensors to detect capacity level
- Awarded 2nd place for our design.

Minecraft Cube Design Challenge

September 2023

- The challenge is to design a cube using Fusion 360 to handle heavy compression while being light. In a team, we decided to use a hexagon shape to reduce a significant amount of cube's mass while maintaining its durability.
- The team was awarded 3rd place.

Balsa Tower Demolition Challenge

October 2023

- The challenge is to construct a balsa tower to replicate a control demolition with a team.
- The tower was first built, then strings were attached from sides of the tower towards the center. The string was then pulled where the structure collapsed inward. Our tower didn't collapse all the way inward but gained insight on how difficult and the way demolition operation needs to be conducted to be successful.

Balsa Bridge Competition, Mid-South ASCE Student Symposium, UT Martin

April 2024

- ASCE Conference's challenge is to design and construct a balsa bridge that will endure loading test.
- My responsibility was to help construct the balsa bridge and assist in running loading and compression test.
- Vanderbilt ASCE awarded 3rd place

Extracurriculars

American Civil Society of Engineering

August 2023 - Present

Member

- ASCE engages students in weekly meetings to learn about the variety of work and innovation in the civil engineering field.

Engineering Without Borders

August 2023 - April 2024

Member, Nicaragua Project

- The organization focuses on assessing and implementing engineering projects in developing communities in other countries. My contribution is the measurements pip design for Nicaragua Project using AutoCAD.

Society of Hispanic Professional Engineers

April 2024 - Present

Member

- The society focus on uniting Hispanic and non-Hispanic engineering students and promotes advancement in engineering and career development programs.

Vanderbilt Gamecraft

August 2023 - Present

Social Chair

- Vanderbilt Gamecraft's mission is to foster social play of tabletop games. My leadership role is helping to organize weekly games night, promoting the club, and designing posters.