Jorge Mendoza

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Education

Vanderbilt University, Nashville, TN

May 2027

Bachelor of Engineering: Civil Engineering; Minor: Engineering Management & Data Science; Clark Scholar

Completed Coursework: Calculus 1 & Il, Multivariable Calculus, Java, Data Science with Python, Sustainability Design in CE,

Static, Technology Strategies, Physics 1

Spring Coursework: Dynamics, Mechanics of Material, Thermodynamics, Transportation Systems, Differential Equations

Skill

Software: Civil 3D, 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.

Created a presentation to showcase my prototype and progress.

• Technical skills develop: QGIS, pgAdmin 4 database, and Python.

Engineering Projects

Steel Bridge Project

November 2024

- Design and build a truss steel bridge with a partner where it should be able to handle 350 lbs load and more before it fails.
- Skills involved was static calculations to ensure the bridge was in equilibrium, and welding when assembling the bridge.
- The bridge ends up holding 840 lbs of load where length was 4ft by 1 ft.

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.
- Constructed the balsa bridge and assist in running loading and compression test.
- Vanderbilt ASCE awarded 3rd place.

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 the cube's mass while maintaining its durability.
- The team was awarded 3rd place.

Fest Engineering Design Challenge

July 2023

- The challenge is to design an engineering solution to a global problem in a team. Overfill trash bins in cities was chosen
- 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.

Extracurriculars

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.

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.