

Janai Dominguez Gonzalez

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EDUCATION

University of Arkansas, Fayetteville, AR
Bachelor of Science in Biological Engineering

Expected: June 2025

WORK EXPERIENCE

Research Assistant, Biological Engineering Department, Fayetteville, AR August 2024 - Present

- Conducted experimental studies to compare the efficiency of two fan technologies in poultry farming operations, focusing on energy consumption and operational costs.
- Collected, analyzed, and interpreted data using excel to quantify differences in energy performance and cost-effectiveness.

Customer Service Specialist, Campus Card Office, Fayetteville, AR September 2023 - Present

- Work 15hr/week while completing 15-17 college credits per semester as a full-time student
- Managed daily customer service operations, overseeing a team of 2 employees while training new hires.

ENGINEERING-RELATED EXPERIENCE

Regenerative Agriculture Senior Design Project August 2024 - May 2025

- Designing and evaluating three erosion control solutions for a pond bank to support sustainable land management practices following NRSC recommendations. Modeled the possible solutions in Civil 3D.
- Measuring on-site soil loss using the Universal Soil Loss Equation (USLE) to quantify erosion under current conditions.

Watershed Management Project Fall 2024

- Utilized the EPA's Storm Water Management Model (SWMM) to analyze and compare the effectiveness of two Low-Impact Development (LID) techniques on a selected site.
- Simulated the implementation of LID techniques using SWMM, achieving a 2% reduction in runoff within the permeable pavement design.

Water Supply System Design Project Spring 2024

- Designed a water supply system by developing a pump curve and system curve to optimize performance and ensure efficient operation.
- Conducted hydraulic calculations to determine flow rates, head losses, and system requirements for proper pump selection.

Watershed Delineation Project Spring 2023

- Utilized ArcGIS to delineate a watershed as my final project for Methods I, analyzing topographical and hydrographical data to define drainage boundaries.
- Produced detailed maps and visualizations to support hydrographical assessments and decision-making for water resource management.

SKILLS SUMMARY

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- Proficiency in Autodesk Civil 3D, AutoCAD, ArcGIS, Minitab, Microsoft Project, and Microsoft Office Suite
 - Strong communication and leadership skills with international and cross-cultural experience
 - Fluent in English and Spanish

LEADERSHIP EXPERIENCE

Secretary of the Panamanian Student Organization Spring 2024 - Present

- Provided leadership by organizing four culturally engaging activities during the Fall semester, one each month, fully funded by the Associated Student Government (ASG).
- Managed administrative responsibilities, including submitting funding requests on time, creating detailed budgets, and coordinating quotes for catering services.

CERTIFICATION/HONORS

Participated in the Intel ISEF Summer 2019

- Presented research on using Lepidoptera as indicators of environmental quality.

Participated in National Science Fair Fall 2018

- Conducted research on water quality in rural Panamanian community, winning first place nationally.