

MR. JOSE ANDRE BONILLAS - MECHANICAL ENGINEER

PROFESSIONAL SUMMARY

I am an Mechanical Engineer with a passion for Automotive, Aerospace, and Manufacturing Engineering. Experienced in team leadership, mechanical design, and mentoring through undergraduate research and STEM projects. Skilled in creative problem-solving and project management, seeking to innovate in the Engineering Industry.

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EDUCATION

Bachelor of Science in Mechanical Engineering | August 2021 - May 2025

Northern Arizona University, Flagstaff, Arizona

- Relevant Coursework: Computer Aided Design, Thermodynamics 1 & 2, Fluid Mechanics 1 & 2, Aerodynamics, Renewable Energy, Heat Transfer, Advanced Fluid Dynamics, Experimental Methods, Engineering Optimization
- GPA: 3.66 - Accelerated Master's Track (M.S. Mechanical Engineering – Expected Graduation May 2026)

EXPERIENCE

Graduate Research Assistant | July 2025 - Current

NAU STEM Education Department - Flagstaff, AZ

- Organized & Analyzed quantitative data of student grades and performance metrics in various STEM classes
- Began collecting qualitative data from student surveys and preliminary class observations

Assembly Technician | July 2025 - August 2025

ValueAdd - Master Electronics - Phoenix, AZ

- Troubleshooted the assembly of various electronic components and component systems
- Fulfilled orders: picked parts/components for assembly from the warehouse, and packaged/labeled finalized orders

Peer Mentor | July 2023 - May 2025

NAU Peer Jacks Mentoring - Flagstaff, AZ

- Mentored 30+ first-year STEM students through academic and social transition
- Led workshops on time & stress management and campus resource utilization

Private Tutor | May 2024 - July 2024

Self-Run Opportunity - Gilbert, AZ

- Tutored a 3rd year high school student with Asperger's Syndrome in Pre-Calculus and World History
- Adapted teaching strategies to individual learning needs, improving subject comprehension and academic confidence

Undergraduate Research Assistant & Peer Mentor | December 2022 - July 2024

NAU Mechanical Engineering Department - Flagstaff, AZ

- Conducted research on engineering education and mentorship effectiveness
- Co-authored internal presentations and facilitated mentoring strategies for STEM retention

Engineering Course Teaching Assistant | May 2023 - August 2023

NAU Mechanical Engineering Department - Flagstaff, AZ

- Guided students in applying core mechanical engineering concepts in College level Mathematics
- Graded assignments and provided one-on-one tutoring for a class of 30+ students

Embroidery Machine Operator & General Assistant | July 2016 - July 2021

My Labor of Love Embroidery - Mesa, AZ

- Supported production processes and assisted with machine operation and maintenance
- Maintained work space organization and cleanliness

PROJECTS & LEADERSHIP EXPERIENCE

Boeing Payload Capable Drone - Project D.O.R.I.S.

NAU Mechanical Engineering Capstone, August 2024 - May 2025

- Served as Payload Engineer and Logistics Chief in a team of 5 engineering students
- Designed and built a heavy-lift drone capable of in-flight payload interchange, in collaboration with Boeing Engineers
- Developed payload systems including a high-resolution camera, and weighted cargo payload
- Practiced interdisciplinary skills such as heat transfer, dynamics, aerodynamics, and cost analysis
- Utilized FDM 3D printing for fabrication of custom airframe and payload components

Society of Hispanic Professional Engineers - NAU Chapter

NAU College of Engineering, August 2022 - May 2025

- Presidential Mentor - September 2024 - May 2025 - mentored future club leaders and provided guidance on club initiatives
- Club President - May 2023 - September 2024 - led club executive board, planned and organized 10+ events, managed partnerships with other NAU Engineering clubs
- Club Vice President - August 2022 - May 2023 - coordinated meetings and facilitated club collaboration

Society of Automotive Engineers - NAU Chapter

NAU College of Engineering, August 2022 - September 2023

- Active Club member - actively participated in club meetings, helping set up and clean up during meetings
- Applied SolidWorks and ANSYS for component design analysis and FEA simulations

American Society of Mechanical Engineers - NAU Chapter

NAU College of Engineering, August 2022 - September 2023

- Active Club member - actively participated in club meetings, helping set up and clean up during meetings
- Applied SolidWorks for component design, and creative problem solving for club design challenges

PROFESSIONAL SKILLS

- Technical: SolidWorks, MATLAB, CURA, Microsoft Office Suite (Excel, Word)
- Soft Skills: Leadership, Team Collaboration, Creative Problem-Solving, Time Management, Highly Motivated, Positive Attitude, Dependable, Flexible
- Languages: English (Fluent), Spanish (Intermediate, Biliterate)

HONORS & AWARDS

- Dean's List, Northern Arizona University, 2021-2025
- Honored 1st Generation Student Graduation Chord, 2025
- Honor for Excellent Student Service Graduation Chord, 2025
- NAU Lumberjack Academic Scholarship, 2021
- Outstanding Senior Scholar Medal, presented by Unit 26 of the American Legion Auxiliary, 2021
- AP Scholar, 2021
- Seal of Biliteracy in Spanish, 2021
- Honors of Excellence in STEM, 2021
- Project Lead the Way 4-Year Program Completion, 2021