CURRICULUM VITAE

ADRIAN MONTENEGRO

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EDUCATION

2020–Present **University of Nevada, Las Vegas**, Las Vegas, NV
B.S. in Civil Engineering, Honors College. Expected Dec 2025.

RESEARCH INTERESTS

Infrastructure systems; water reuse and treatment; data-driven modeling; cooling-water systems; sustainable design; decision-making under uncertainty; life-cycle thinking.

RESEARCH AND ACADEMIC PROJECTS

2025–Present **Waste to Watts: Perched Groundwater for Data-Center Cooling**
Senior Design Project, UNLV
Evaluating feasibility of using local perched groundwater as a supplemental cooling-water source for a hyperscale data center. Contributions include water-quality analysis, IX/RO modeling, column-design support, construction cost estimation (HeavyBid), and full-project Gantt scheduling. Work integrates hydrology, treatment, and operations.

2023–2024 **Life Cycle Assessment: Indoor Dining vs. Delivery Systems**
Course-Based LCA Study
Led emissions modeling, material balances, and sensitivity analysis. Produced a gate-to-grave LCA comparing dine-in and delivery meals under Las Vegas conditions.

2022 **Lethal Learning: Systems Analysis of Campus Security**
Honors Research, UNLV
Modeled campus safety as a socio-technical system, analyzing interactions between infrastructure, staffing, and student well-being. Proposed system-level improvements.

2019–2020 **Engineering for People Design Challenge – Peru**
Engineers Without Borders USA
Co-developed resilient housing and community-facility concepts for coastal communities facing unreliable water infrastructure. Evaluated local materials and long-term cost/LCA tradeoffs for passive-cooling systems and cladding concepts.

PUBLICATIONS AND PRESENTATIONS

2022 **"Lethal Learning: Systems Engineering Analysis of Campus Security Infrastructure."**
Poster presented at the UNLV Office of Undergraduate Research Symposium; archived in UNLV Libraries.

2025 **"Waste to Watts: Repurposing Perched Groundwater for Data-Center Cooling."**
Senior Design report documenting treatment modeling, field sampling, and cost analysis.

TECHNICAL SKILLS

Engineering: Water treatment fundamentals (IX, RO), hydraulic calculations, pump and pipeline sizing, construction cost modeling, CPM/Gantt scheduling, LCA, uncertainty framing in engineering systems.

Software: Bluebeam Revu, HeavyBid, ACC, Microsoft Excel, React (TypeScript/TSX), CSS Modules, GIS familiarity.

PROFESSIONAL EXPERIENCE

2025–Present **Project Engineer Intern**, Helix Electric, Las Vegas, NV
Support a multi-disciplinary team on a hyperscale data center project, coordinating electrical systems, material logistics, and specification checks. Utilize Bluebeam and Accubid for cost analysis and feeder scheduling.

2024–2025 **Engineering Student Advisor**, UNLV
Led 3–4 hour tours for prospective engineering students, showcasing labs and academic pathways. Provided advising on research involvement, design teams, and student success.

2024 **Field Team Member, Super Bowl LVIII – Backlit**, Las Vegas, NV
Coordinated field movements and timing cues for live halftime performance. Completed 50+ hours of onsite preparation to ensure synchronized technical execution.

2023–Present **Guest Advocate**, Target, Las Vegas Strip, NV
Delivered customer support in a high-volume retail environment, maintaining store flow and resolving day-to-day operational issues.

SERVICE AND LEADERSHIP

2024–Present **Associated General Contractors (AGC), UNLV**
Compete in Heavy Civil regional and national challenges, focusing on cost modeling, scheduling, and constructability. Support chapter programming, industry networking, and construction-site engagements.

2024–Present **Society of Automotive Engineers Baja, UNLV**
Contributed to engineering and fabrication for RR7 with 4WD integration, emphasizing frame performance and drivetrain reliability.

Ongoing **Engineering Outreach and Leadership**
Served as an Engineering Student Ambassador, connecting prospective students and community partners with engineering and research opportunities.

AWARDS AND HONORS

2025 Senior Design Finalist – CEE Department, UNLV.
2024 Nevada Gold Mines Scholarship ($2,500).
2023 CyberSecurity Excellence Award – 1st Place.
2021 LSAMP Research Stipend ($5,000).
2020, 2022, 2023 Dean's List, University of Nevada, Las Vegas.
2020 Engineering for People Design Challenge – National recognition and scholarship.

INTERDISCIPLINARY AND CREATIVE WORK

2022 **Sound Designer & Audio Engineer – "Into the Darkness"**
Designed intro soundscape and contributed to full audio engineering for an award-winning short film. Applied systems thinking and signal processing to create coherent narrative sound design.

2023–Present **OptoMat & FieldFlow Software Tools**
Developed OptoMat, a materials-evaluation interface for cost and sustainability scoring, and FieldFlow, a lightweight construction-productivity dashboard based on spreadsheet workflows. Designed for clarity, speed, and field usability.

CERTIFICATIONS AND LANGUAGES

Certifications: OSHA 10-Hour; CPR & First Aid.
Languages: English (native); Spanish (native); Italian (intermediate).