Joe Morrison

Mechanical Engineering (Pre-Engineering) Student | Operations Leadership | Python/TensorFlow Prototyping | U.S. Citizen

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Mechanical engineering student on a mathematics (pre-engineering) track with a 4.0 GPA and Phi Theta Kappa honors. Hands-on, safety-critical field leadership from tree service work alongside software prototyping experience, including a Python/TensorFlow engine-noise diagnostic application.

EDUCATION

San Jacinto College (Central & South Campus) | A.S. Mathematics | Pre-Engineering Track | Expected 2026
- GPA: 4.0
- Phi Theta Kappa Honor Society (Inducted 2025)

Texas A&M University (Kingsville) | Summer Bridge Program | Stipend Recipient | Summer 2025

SKILLS

Programming / ML: Python; TensorFlow
CAD / Simulation: AutoCAD; Onshape; QBlade
3D / Interactive: Unity; Unreal Engine; Blender
Productivity: Microsoft Excel
Media Tools: Photoshop; Premiere Pro
Field / Operations: Rigging systems; climbing gear; chainsaws/aerial tools; job-site safety; crew communication

PROJECTS

Engine Noise Diagnostic App (Python, TensorFlow) | 2024-Present
- Built an ML model that tags common engine faults using live audio input; achieved 85% accuracy on a held-out validation set (current iteration).
- Implemented continuous microphone streaming and a custom UI for real-time monitoring with a latency of ~100ms.
- Trained on ~200 labeled clips across 6 fault classes.
- Planning in-vehicle prototype: ESP32 audio capture + streaming; on-device inference target TBD (Pi/PC).

Wind Turbine Design (TAMUK Bridge) | Summer 2025
- Designed and tested multiple rotor concepts using QBlade and Onshape, balancing efficiency and power output.
- Presented results and design tradeoffs to a large audience at the end of the program.

VR & 3D Design Experiments (Unity / Unreal Engine / Blender) | 2017-Present
- Built/iterated VR physics demos in Unity/Unreal; optimized performance and tuned simulation behavior.

EXPERIENCE

Tree Service Technician / Crew Lead (Alvin Tree Service) | Alvin, TX | 2023–2024
- Led crews during high-risk climbing and rigging operations; prioritized clear communication and safety discipline.
- Coordinated workflow and executed precision removals using rigging systems, climbing gear, and power tools.
- Diagnosed and repaired mechanical faults in equipment to maintain reliability under demanding conditions.

Landscaping Assistant (Southard Landscape Designs) | Pasadena, TX | 2022–2024
- Delivered landscaping projects on schedule by adapting to on-site constraints while maintaining quality standards.

CERTIFICATION

PADI Open Water Diver (Divers Down) | Webster, TX | 2024
- Trained in SCUBA systems, high pressure safety, and emergency response.