NICHOLAS G GULDE, E.I.T.

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EDUCATION AND CREDENTIALS

B.S. in Manufacturing and Mechanical Engineering Technology May 2025
Texas A&M University

Certified Engineer in Training in the State of Texas July 2025
Texas Board of Professional Engineers and Land Surveyors

Presented Research on Screw Propelled Robotics May 2025
International Conference on Computing in Civil Engineering (i3CE 2025) hosted by The American Society of Civil Engineers

Certified Safety Professional June 2025
National Association of Safety Professionals

PROJECTS

Robotic Screw Propelled Front Loader Aug 2024 - May 2025
Los Alamos National Laboratory - The U.S. Department of Energy

- Led the mechanical design, engineering analysis, fabrication oversight, and testing of a full-scale screw-propelled robotic vehicle platform addressing traction limitations in challenging terrain applications
- Integrated an industrial-scale hydraulic system with a remote-control electronic control system; developed a 400+ component assembly incorporating multiple subsystems and performed finite element analysis to evaluate structural performance
- Design continues as an iterative development project for LANL and future TAMU capstone teams

Independent Vehicle Systems Engineering Projects Jan 2020 - June 2024
Self Employed

- Managed acquisition, refurbishment, and resale of 10+ vehicles while developing hands-on experience in mechanical systems, diagnostics, and fabrication
- Completed suspension modifications, aftermarket fuel system installations, custom wiring harness fabrication, and electrical diagnostics on previously non-operational vehicles

EXPERIENCE

Production Quality Engineer Sept. 2025 - Current
EControls, Inc.

- Supported quality engineering activities for high-volume production lines representing more than **$50 million in annual revenue and 800,000 assemblies annually.**
- Reduced production scrap by up to **70%** through process improvements and corrective action implementation
- Improved inspection process effectiveness by reducing false rejects from **81% to 23%**
- Led cross-functional root cause investigations for assembly failures, utilizing data analysis and engineering methodologies to identify corrective actions
- Supporting new product introduction activities for advanced lithium-ion battery charger systems
- Investigated volume controlled application of lubricants and adhesives in assemblies
- Authored and maintained engineering documentation including PFMEA, DFMEA, control plans, process flow diagrams, and work instructions

Student Design Engineer Jan 2024 - June 2024
Rik-Mar Fabricators

- Developed CAD models and manufacturing drawings from preliminary concepts and incomplete design inputs
- Designed and fabricated electronic garage signage for Texas A&M
- Leveraged SolidWorks tools to perform sheet metal forming calculations

TECHNICAL SKILLS

Manufacturing & Testing: PAUT Non-Destructive Testing, HAAS Lathe & Mill CNC Machining, 3D Printing, FANUC Robots, Tensile/Impact Testing, Metrology, Validation Testing, 3D Scanning
Engineering Methods: Design for Manufacturing & Assembly, Strength of Materials, Thermodynamics, Fluid Mechanics, Industrial Electricity, Finite Element Analysis, Root Cause Analysis, PFMEA/DFMEA, GD&T, Statics & Dynamics, Cross Functional Collaboration
Engineering Software: SolidWorks, ControlLogix PLC Programming, G-Code, MATLAB, Python, VBA