# TANNER EISCHEN

## AI Evaluation & Applied AI Engineer

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### SUMMARY

AI evaluation and applied AI engineer with a PhD in geological sciences and a marine geophysics research background. Builds reproducible benchmark tasks, browser automation, and full-stack AI applications. Combines scientific reasoning with Python and TypeScript engineering to diagnose model failures and turn them into testable requirements.

### EDUCATION & CREDENTIALS

**PhD, Geological Sciences (Marine Geophysics)** | University of Texas at Austin

**M.S., Geological Sciences** | East Carolina University

**B.S., Geology** | Gustavus Adolphus College

Certificate, Environmental Geology and Hydrogeology | East Carolina University

IBM Full Stack Software Developer Professional Certificate, 2025

### PROFESSIONAL EXPERIENCE

**Snorkel AI** 2024 - Present

*Expert Contributor & Reviewer | AI Evaluation Engineering*

- Authored 50+ benchmark tasks for Terminal Bench and Reasoning Bench across coding, physics, mathematics, and geoscience, including containerized environments, reference solutions, scoring rubrics, and deterministic validation.
- Promoted to Reviewer within one month; identified 100+ reasoning, validation, and reproducibility defects. Refined task specifications and checks through model-failure analysis and review of scientific validity.

**Gauntlet AI** Oct 2025 - Dec 2025

*AI Engineering Fellow | Austin, TX*

- Completed a 10-week accelerator, building and deploying functional AI products through weekly end-to-end engineering sprints.
- Developed LLM applications and tool-using workflows with Python, TypeScript, React, FastAPI, model APIs, and Docker, from problem definition through testing, deployment, and demos.

**Hack the Gap** Feb 2024 - Oct 2025

*Full-Stack Developer*

- Built and shipped 10+ features and REST API integrations in React, Node.js, and Express for internal products and three client projects delivered on schedule.
- Implemented input validation, structured error handling, accessible interfaces, and tests; documented modular components and integrations for maintainable team handoffs.

**The University of Texas at Austin** Aug 2020 - Feb 2023

*Research Assistant, Institute for Geophysics | Austin, TX*

- Built reproducible Python/Jupyter pipelines for terabyte-scale 3D seismic datasets from Axial Seamount, covering data cleaning, quality control, anomaly detection, visualization, and interpretation.
- Combined seismic interpretation and machine learning in documented workflows, maintaining data integrity and supporting 3+ research outputs.

## SELECTED AI & SOFTWARE PROJECTS

**NLWebAgent** | Python, Playwright, CLI, multi-model vision
github.com/Tanner-Eischen/NLWebAgent

- Built a natural-language browser testing agent with 10 typed actions and four model providers, including fallback routing, semantic assertions, and self-healing selector resolution.
- Converted recorded browser sessions into Playwright tests; added video artifacts, structured pass/fail reports, and automated tests for parsing, assertions, and agent/browser modules.

**Ghostfolio Agent** | Python, FastAPI, LangGraph, React, Docker
github.com/Tanner-Eischen/ghostfolio-agent

- Built and deployed a portfolio assistant with tool-based analysis, conversation memory, confidence-scored response verification, and live market-data integrations.
- Implemented curated evaluation cases and verification checks; achieved 88% overall test coverage and containerized the FastAPI/React stack for Railway deployment.

**RoofSegmentation** | PyTorch, FastAPI, React, Google Maps API
github.com/Tanner-Eischen/RoofSegmentation

- Developed a U-Net rooftop segmentation system with an EfficientNet-B2 encoder, achieving 87.22% validation IoU on 890 annotated aerial images and approximately 10 ms inference per 256 x 256 tile.
- Benchmarked ResNet34, ResNet50, and EfficientNet-B2 encoders, improving baseline IoU by 1.5% while keeping the train/validation gap below 4%.

## ADDITIONAL EXPERIENCE

**StudyPoint & AirTutors** Aug 2020 - Sep 2025
*Math, Physics & ACT/SAT Instructor*

- Taught 20+ students and raised average ACT scores by 5 points, translating complex quantitative concepts into actionable feedback.

**AECOM** Jan 2020 - Jul 2020
*Geologist | Raleigh-Durham, NC*

- Supported drilling oversight for 25+ wells and borings and delivered groundwater, geospatial, and hydrogeologic analyses for 6+ technical reports.

## TECHNICAL SKILLS

**Software:** Python, TypeScript, JavaScript, SQL, Bash, React, Node.js, Express, FastAPI, PostgreSQL, REST APIs

**AI & Evaluation:** LangGraph, LangChain, model APIs, benchmark design, reference solutions, rubrics, model-failure analysis

**Testing & Delivery:** Playwright, pytest, Vitest, Jest, Docker, Git/GitHub, CI/CD

**ML & Scientific Computing:** PyTorch, scikit-learn, pandas, NumPy, Jupyter, computer vision, seismic and geospatial data processing

## AWARDS

Best Graduate Research Oral Presentation, East Carolina University; Graduate Student Research Grant Award Winner