

MATTHEW HARTIGAN, P.E.

Offshore Structural/Marine Engineer | Full-Stack Developer

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🌐 www.deepwaterdigital.tech | github.com/deepwater-digital 📍 New Orleans, LA



SUMMARY

Multidisciplinary engineer with 11+ years of hands-on experience designing, building, and maintaining offshore oil platforms — alongside 5+ years experience building full-stack software tools for a range of clients through a small tech studio I run independently. I enjoy turning messy, real-world workflows into clean, scalable digital products. I'm seeking a role on a small, mission-driven team that is developing next-gen infrastructure, construction methods, and/or manufacturing technology.

ENGINEERING EXPERIENCE



Marine Engineer

2023 - Present

Chevron

Louisiana

- **Inspection** – Lead annual inspections of ballast tanks on floating platforms in compliance with USCG and ABS regulations.
- **Maintenance** – Interpreted inspection data to prioritize structural maintenance and asset integrity decisions.
- **New Technologies** – Identified and deployed next-gen robotic inspection tools to enhance field safety and data capture (e.g. mini robotic submarines)
- **Featured Speaker** – 2024 Deepwater Ops & Topsides Conference in Galveston, TX – "Employing Technology & Robotics to Deepwater Asset Inspections".



Offshore Structural Engineer

2018 - 2023

Chevron

Texas, Africa

- **Design** – Delivered Phase 2 conceptual design and Pre-FEED deliverables for the South N'Dola jacket for Chevron Angola.
- **Analysis** – Performed structural analysis for company's global portfolio of fixed and floating platforms using ANSYS, Abaqus, and SACS.
- **Installation** – Supported loadout, transport and offshore installation of the SLGC jacket in Angola (Block 0) as client rep site-based engineer.



Project Engineer - "Bigfoot" Platform

2014 - 2018

Chevron

Texas

- **Procurement** – Coordinated with global vendors to manufacture and deliver mooring system components to the fabrication yard on schedule.
- **Fabrication** – Supervised fabrication and loadout operations at Kiewit Yard in Ingleside, TX, ensuring compliance with technical and safety standards.
- **Installation** – Client rep onboard deepwater construction (crane) vessel during platform installation ~200 miles offshore in the Gulf of Mexico.

TECH EXPERIENCE



Founder & Technical Lead

2020 - Present

Deepwater Digital LLC

Remote

Building Custom Full-Stack Applications for Diverse Clients

- **Chainview Capital Hedge Fund (Fintech)** Designed and deployed full-stack cloud infrastructure for a quantitative hedge fund. Built automated trading bots executing strategies driven by proprietary ML models.
- **Custom Tournament Solutions (Event Tech):** Developed a full-stack web platform for managing fishing tournaments, including real-time scoring, registration, sponsor tools, and betting pots. Expanded initial MVP into a scalable, hands-off SaaS product used by 400+ participants.
- **Field Sense AI (Ecology):** Built an end-to-end system for collecting and analyzing wildlife audio recordings using machine learning. Enabled a dual-tier experience for free and paid users with real-time visualization of model outputs.

TECHNOLOGIES

Programming & Frameworks:

JavaScript/TypeScript (React, Node.js, Express.js), Python (Flask)

Cloud & Infrastructure

GCP, Heroku, Firebase, Stripe (React Integration), Hubspot (for automated marketing campaigns), SQL, NoSQL

Data & Machine Learning:

Python ML Libraries (various), H2O.ai, Hugging Face, Daily workflow includes ChatGPT + Claude + Cursor

EDUCATION

BSE, Civil & Environmental Engineering

Univ. of Michigan

2013

Ann Arbor, MI

- Men's Volleyball, Steel Bridge Team

MSE, Structural Engineering

Univ. of Michigan

2014

Ann Arbor, MI

- Men's Volleyball, Steel Bridge Team

BS, Computer Science

Regis University

2020

Remote (at night)

CERTIFICATIONS

Licensed PE – Civil, TX #123268 (Active)

Spanish – DELE C1 (registered for Nov-2025 exam)