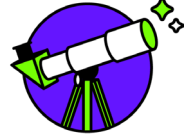
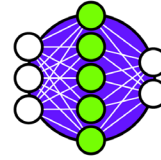
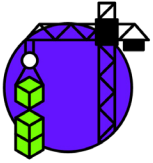


Signal through noise: Building emergency-response software to access critical data in moments

testdouble®
Case Study



The Client



Environment: Deep sea research tools & services

Size: 5

Location: Washington DC, New York, Massachusetts & California | pelagic-services.com

Engagement: AI-enabled product delivery

The Mission

Techniques: Ruby on Rails, JavaScript, AWS, API data integrations

Impact Areas: AI-enabled rapid product delivery, product strategy, infrastructure, domain-specific data integrations

Mission-critical emergency software for the ocean's final frontier

PRS is expert in building, mobilizing, operating, and staffing ROV systems on a global basis. When the OceanGate Titan failed to return to surface after a planned mission to the site of the RMS Titanic in June 2023, OceanGate activated PRS for search and rescue. Managing hundreds of decisions and coordinating with countless elements of a successful offshore subsea operation, PRS immediately mobilized their 6000-meter Odysseus 6K ROV System, carried by USAF C-17s to an awaiting vessel in St. John's, Newfoundland, and raced against the clock to reach the seafloor to locate, and ideally rescue, the missing crew.

Though the discovery of the Titan's catastrophic implosion was a devastating coda to the PRS mission, it highlighted a fundamental issue with current maritime search and rescue systems: a lack of assets, capability, and expertise to respond to a subsea emergency.

It was this safety gap that led PRS to design their SYSTEM 3R: Rapid, Ready-state, Response program, that at its core is a proprietary, cloud-based software system that tracks client vessel movement and submersible operations, in addition to generating "Integrated Emergency Response Plans" immediately prior to every submersible dive.

Make the scary stuff boring

testdouble.com | hello@testdouble.com

The Fix

From industry and SAR authority gap to scalable software application

PRS had a focused vision, but needed a technical partner to move from concept to production-ready platform fast enough to meet market opportunities. Building software to deftly handle the complexity of real-time marine, infrastructure, and weather data integration was key because seconds count in maritime emergency response.

We brought in the right skill sets across product management, DevOps, and senior software engineers and worked in tight agile cycles with weekly deliverables, adjusting up or down as needed. The team balanced startup velocity with production-grade quality, pairing AI-accelerated development with an average 15+ years of engineering and product management experience to deliver a system Pelagic's founders trusted to present to major clients.

Great Software

- **Production infrastructure from day one:** AWS, data modeling, and API integrations built for scale
- **Real-time data synthesis:** Integrate up-to-the minute user provided dive info in a single view with direct API integration to weather, marine traffic feeds, Coast Guard locations, and airport data
- **AI-enabled development with senior guardrails:** Features delivered in hours while maintaining architectural integrity and reliability
- **Extensible codebase:** Built for expansion and ongoing feature development, not technical debt

Great Teams

- **Embedded collaboration:** Translate operational expertise into iterative software development
- **Flexible team scaling:** Adjust resources up and down as needs evolved
- **Signal through noise:** Nuanced view of API data integrations to provide iERPs with the necessary data in critical moments
- **Go-to-market readiness:** Equip Pelagic to confidently demo and sell platform to prospective clients

The Results

Production-ready software at startup speed

Test Double transformed Pelagic's concept into a market-ready platform in 2 months. From kickoff in mid-May to client demos by July, the team delivered production-ready software and tested integrations to enable Pelagic's founders to confidently present to major potential clients.



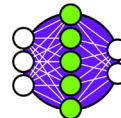
Ready-state rescue services endorsed by leading submersible builders, government SAR groups, and militaries globally



Production-ready platform delivered in under 2 months



AI-accelerated development without sacrificing quality



Real-time synthesis of complex marine data

The Team



A.J. Hekman
Agent 00156



Bob Conrad
Agent 00169



Dustin Tinney
Agent 0013



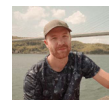
Ed Toro
Agent 0086



Jason Allen
Agent 0059



Joseph Lozano
Agent 0097



Tyler Sloane
Agent 00150