Matthew Iannucci

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Experience

December 2020 - Present — **RPS Ocean Science** — South Kingstown, RI

Lead Software Engineer

- Lead software engineering efforts across range of full-stack web-based meteorological and ocean science tools, interface with clients, and plan development sprints for individual projects.
- Develop open source solutions with Python and JavaScript to improve metocean data management and analysis capabilities with existing scientific ecosystem.
- Utilize AWS and Azure to improve cloud capabilities for company and clients to optimize cost and developer velocity.

Senior Software Engineer

- Develop and deploy "Survey Mobile" iOS app for Environmental Risk clients to aide consultants in the field.

January 2014 - December 2020 — **Navatek, LLC** — South Kingstown, RI

Software Engineer II

- Lead software development team of four engineers to create a network simulation platform for simulating performance of DoD routing algorithms using the NS-3 framework, C++, JavaScript, React, and Docker.
- Lead software development efforts to develop a precise registration system for use in Augmented Reality/Virtual Reality (AR/VR) systems in shipyard and industrial environments using depth cameras, tracking cameras, C++, and OpenCV.
- Work in a team to create a modern extensible desktop GUI application for hydromechanical simulation visualization (NavaSim) for DoD customers using C++ and Qt.
- Write and pitch technical proposals to government and private sector entities in response to solicitations utilizing technical knowledge in software, sensors, and other computing systems.

Software Engineer I

- Designed and implemented a new company wide standard software project architecture using CMake to allow for all company projects to be utilized on both Linux and Windows operating systems.
- Develop a software framework and GUI Tool for optimizing the structural design of ship hulls through the use of genetic algorithms.
- Design and develop a prototype video game controller for SeaPerch robots using an embedded platform.

Engineering Intern

- Assist in developing new geometry processing tecniques for Aegir, Navatek's in-house potential flow solver

March 2013 - December 2013 — **Equipment Development Lab** — URI Graduate School of Oceanography

Marine Research Assistant

- Assisted in a study conducted by URI and the Rhode Island Department of Energy to measure the acoustic impact of wind turbines through data collection, visualization, and analysis

Apps

October 2013 - Present — **HopeWaves** — https://hopewaves.app

An automated surf forecast system for Rhode Island with Web, iOS, and Android apps for viewing the latest conditions and forecasts. Stack: Python, React, React-Native, Rust, Docker, Google Cloud

December 2022 - Present — **PlayBuoy** — https://playbuoy.app

Full-stack app to visualize directional wave data from NDBC wave buoys and GFS Wave model runs. Stack: Rust, Next.js, SwiftUI, Docker, Google Cloud

Education

May 2014 — **Bachelor of Science, Ocean Engineering** — University of Rhode Island

B.S. in Ocean Engineering with a focus in Software Development, Instrumentation, and Robotics

Technical Skills

Languages — **Python**, **JavaScript**, **TypeScript**, **Rust**, **Swift**, **C++**, C, Objective C, Fortran, Go, Matlab, Bash, HTML, CSS

Tools & Frameworks — **React**, **React-Native**, **Xarray**, **NumPy**, **Matplotlib**, **Next.js**, **Node.js**, Zarr, XPublish, Mapbox GL, Tailwind CSS, PostgresSQL, Firebase, Argo, Redis, Git, Grib, NetCDF, Kerchunk

Platforms — **Web**, **iOS**, **AWS**, **Google Cloud**, Android, Docker, Linux, Kubernetes, WebGL

Outreach

October 2018 - May 2019 — **Senior Project Mentor** — Narragansett High School

Served as a Senior Project Mentor for a student creating a game for iPhones using Unity 3D