

Matthew Iannucci

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Experience

January 2014 -
Present

Software Engineer Navatek, Ltd

- Work in a team to create a modern desktop GUI application for hydrodynamic simulation visualization. Challenges include creating an intuitive user interface design, creating a consistent and modular code base, and creating a clean plug-in API using TCP/IP socket communication
- Lead development efforts to create new visualization tools for Markov Decision Process solutions
- Use genetic algorithms to create tools for rapidly generating robust ship hull designs for low-fidelity testing
- Co-ordinate with Navy (NSWCCD) clients to implement consistent and robust interfaces that work for all parties. Also includes troubleshooting any problems clients may have with the company code
- Worked to improve the robustness of Aegir, the companies potential flow solver (CFD). Tasks include improving the interface binding Fortran code with external C++ libraries, and helping to design output and input data improvements
- Port all of the company projects to be cross platform compatible by switching to CMake. Previously, the programs were limited to use by Windows customers and required Visual Studio
- Set up, maintain, and use a Linux cluster running CentOS 6+
- Set up and maintain the Windows Active Directory Server for the Rhode Island office (About 30 users)

December 2012 -
August 2014

Software Developer, Co-Captain URI Autonomous Surface Vehicle Team

- Leader and member of the software development team tasked with creating a completely autonomous boat that navigates a buoy course and performs various tasks, such as navigating a buoy course, utilizing real-time sensor data
- Competed at the 2013 and 2014 AUVSI RoboBoat competition in Virginia Beach

March 2013 -
December 2013

Marine Research Assistant URI GSO Equipment Development Lab

- Assisted in a study conducted by the University of Rhode Island College of Environment and Life Sciences and Rhode Island Department of Energy to measure the acoustic impact of wind turbines through signal analysis
- Assisted in conducting field trials for ONR sponsored equipment development

Education

September 2010 -
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

Projects

October 2013 -
Present

HopeWaves Mobile Apps <https://hopewaves.app>

A cross-platform native mobile application to view and monitor the surfing conditions in Southern Rhode Island using NOAA WaveWatch III data

September 2013 -
May 2014

Embedded Wireless Bridge Health Sensor University of Rhode Island & RIBTA

Prototyped structural health monitoring software for the Newport Pell Bridge utilizing Linux and mesh networking

Technical Skills

Languages

C++, Swift, Python, Objective C, JavaScript, Java, C, Fortran, Go, Matlab, Bash, TypeScript, HTML, CSS, Dart, C#

Frameworks

React-Native, UIKit, Qt, React, Google App Engine, Flutter, Unity 3D, Firebase

Platforms

iOS, Android, Linux, Windows, OSX, Web

Applications

Xcode, Visual Studio, VSCode, Git, Matlab, Android Studio, Microsoft Office, Adobe Creative Suite, Rhino

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

June 2017

Judge AUVSI RoboBoat National Competition

Served as a Judge for the annual RoboBoat autonomous surface vehicle competition in Daytona Beach, Florida

April 2010

Surf For A Wish Surf Competition

Created, organized and ran a surfing competition at Narragansett Town Beach to benefit the Make-A-Wish Foundation