Matthew Iannucci

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Experience

Software Engineer, Navatek, Ltd, *January 2014 - Present*

- 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)

Software Developer, Co-Captain, URI Autonomous Surface Vehicle Team, *December 2012 - August 2014*

- Leader and member of the development team tasked with creating a completely autonomous boat that navigates a buoy course and performs various tasks, such as navigating a buoy course
- Developed software outlining machine behavior that utilized real-time sensor data
- Responsible for hardware abstraction through Python and C++ programming
- Competed at the 2013 and 2014 AUVSI RoboBoat competition in Virginia Beach

Marine Research Assistant, URI GSO Equipment Development Lab, *March 2013 - December 2013*

- 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

University of Rhode Island, *Graduated May 2014*
B.S. in Ocean Engineering with a focus in Software Development and Robotics

Projects

HackWinds Mobile Apps, *2013 - Present*

- Created a cross-platform native mobile application to view and monitor the surfing conditions in Southern Rhode Island
- Designed user interfaces that adhere to respective design guideline (iOS and Android)
- Used object oriented software design to create an efficient and modular code base
- Utilizes data from both public API's and a custom backend API created using Google App Engine
- Available from both Google Play and the iOS App Store

Embedded Wireless Bridge Health Sensor, *September 2013 - May 2014*

- Team member developing a wireless sensor for bridge health monitoring, specifically the Newport Bridge and the Rhode Island Bridge and Turnpike Authority
- Charged with developing embedded software and cooridinating time synchronization between multiple network connected sensors
- Gained experience with low-level Linux development

Surf For A Wish Surf Competition, *April 2010*

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

Technical Skills

Programming Languages: C++, Python, Java, Objective C, Swift, Fortran, Go, Matlab, Bash, JavaScript, HTML, CSS
Platforms: Linux, iOS, Android, Qt, Windows, OSX, Web
Programs: Git, Matlab, Rhino, Microsoft Office, Adobe Creative Suite