

Reinaldo Molina

M.S. SOFTWARE ENGINEERING · B.S. ELECTRICAL ENGINEER

Clearwater, FL, USA

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Summary

Results-driven software/hardware lead with over 8 years of experience specializing in Object Oriented analysis and design using C++. Proven track record of managing all stages of the development cycle and leading technical activities. Passionate about Free Open Source Software and Unix related technologies.

Work Experience

International Cybernetics

Clearwater, FL

SOFTWARE/HARDWARE LEAD

Oct 2022 - Present

- Lead a team of 4 engineers in the maintenance and development of a data acquisition system
- Developed modern C++ code for a Linux backend data collector computer
- Integrated new sensors into a hardware application in charge of collecting data from multiple communication interfaces.
- Implemented industry-specific algorithms in accordance with industry standards

Honeywell Aerospace International

Clearwater, FL

SENIOR SOFTWARE ENGINEER

May 2015 - Oct 2022

- Maintain and enhance a C++ based testing framework.
- This framework controls several hardware interfaces, such as: Power Supplies, DIO modules, relays, oscilloscopes, and various National Instruments analysis cards.
- Implemented graphical user interface to display data from various Inertial Navigation Systems.
- Improved automated test scripting standards, test review checklists, and test execution procedures, significantly reducing review and execution time.
- Coordinated and resolved testing and development issues that engineers and customers had at multiple locations (South Korea, Puerto Rico, FL, NM, NJ).
- **Awards:** Honeywell Aerospace 2017 Outstanding Engineers.

BlackBerry

Ft. Lauderdale, FL

ELECTRICAL TEST INTERN

Fall - 2014

- Member of the handheld hardware development team responsible for the design, integration, and verification of the baseband and digital subsystems for a mobile computing design.
- Directly responsible for testing all communication interfaces.

Skills

Programming Languages C++, Python, Java, C#, UML, TeX, Vimscript.

IDEs Visual Studio, CMake, Borland C++ Builder.

Linux Distributions Arch, Ubuntu, Lubuntu.

Development Boards Odroid, BeagleBone, Raspberry Pi, CPLDs, FPGAs.

Languages Fluent in English and Spanish.

Certifications

Machine Learning Foundations: A Case Study Approach

Online

COURSERA

May 2022

- Credential ID: 2PNY97HX4AAK

M.S. in Software Engineering

World Campus

PENNSYLVANIA STATE UNIVERSITY

Aug. 2017 - Aug 2019

Free Open Source Software Development

file-audit-system

LINUX FILE SYSTEM MONITORING AND AUDITING APPLICATION

Roll: Author & Maintener

- File monitoring software that logs file access to configured directories on the system.
- <https://github.com/tricktux/file-audit-system>.
- *Technologies: C++-11, CMake, Linux Auditing System*

dotfiles

COLLECTION OF DOTFILES FOR OVER 15 DIFFERENT LINUX, AND WINDOWS APPLICATIONS

Roll: Author & Maintener

- <https://github.com/tricktux/dotfiles>
- *Technologies: tmux, zsh, ssh, gnupg, bash, i3wm, git, (neo)vim, polybar, cmus, neomutt, paccor*

molinamail.com

SELF HOSTED SERVER FOR: EMAIL, CLOUD STORAGE, CALENDAR, AND CONTACTS

Roll: Author & Maintener

- Feel free to email me at: *me at molinamail dot com*
- <https://box.molinamail.com/email>
- *Technologies: DigitalOcean, AWS-Route53, Mail-In-A-Box, fail2ban, ufw*

Academic Engineering Experience

Final Project for Master's Program

Clearwater, FL

CAPSTONE EXPERIENCE

Summer - 2019

- Team Effort to develop a Patient Portal System web application.
- The application included: Ability to register, make appointments, todo list items, doctor chat, view health records, prescriptions, and pay bills.
- *Technologies: Amazon Web Services: EC2, SES, Route53. Java, Python, Selenium, Gradle, Spring Boot, Junit*

Design of an Autonomous QuadCopter

Gainesville, FL

SENIOR DESIGN COURSE

Spring - 2015

- Design a QuadCopter with the purpose of surveying a specific GPS area with aid of a camera.
- *Technologies: C++, CMake, ROS, Odroid, Embedded Software, PCB Design, OpenCV, Ubuntu, ATxmega*

Precision Agriculture Research Lab

Gainesville, FL

RESEARCH STUDENT

Summer - 2014

- Member of a research group working on the development of an autonomous system whose objective is to recognize and eliminate weeds from crop fields.
- *Technologies: C++, BeagleBone, Embedded Software, OpenCV, Ubuntu*

T.A. for Digital Logic Lectures

Gainesville, FL

TEACHER ASSISTANT

Summer - 2014

- Responsibilities included teaching the laboratory section, grading homework, quizzes, exams, and providing office hours.

Design of an Autonomous Rover Vehicle

Gainesville, FL

INTELLIGENT MACHINE DESIGN LAB COURSE

Fall - 2013

- Construction and design of a vehicle capable of doing facial recognition, color recognition, and obstacle avoidance.
- Selected as one of the top 3 projects of the class.
- <https://sites.google.com/site/thepatrollingandroid/home>
- *Technologies: C++, CMake, ROS, Odroid, Embedded Software, OpenCV, Ubuntu, ATxmega*

Education

B.S. in Electrical Engineering

Gainesville, FL

UNIVERSITY OF FLORIDA

Jan. 2012 - May 2015