Paolo Torres

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Skills

Languages/Tech: C/C++, Python, Arduino, JavaScript/Node.js/JSON, HTML/CSS/Bootstrap
Libraries/APIs: OpenCV, scikit-learn, jQuery, RESTful APIs, Twitter API, Riot Games API
Methodologies/Paradigms: Scrum/Agile, Test-Driven, Asynchronous I/O, Modular, OOP
Tools: Linux (Ubuntu), Terminal, Git, Visual Studio, Eclipse, Postman, SolidWorks, AutoCAD

Experience

Software Developer & QA Intern - Solink — Jan 2017 - Apr 2017

- Developed central data source connector in Node.js for **10,000+ POS device transactions** everyday
- Wrote **software tools** and **automation scripts** through **Scrum/Agile** practices saving hours of work
- Prototyped and pitched computer vision implementation to initiate early development of new features

Embedded Developer - Waterloo Aerial Robotics Group — Sep 2016 - Dec 2016

- Designed a **debugging system** in **C** for the **GPS** to prevent coordinates from incorrectly locking values
- Utilized integer-based commands to **control decision-making** for the aircraft's probe drop mechanism
- Employed pulse width modulation code on mounted camera to manage payload imaging for competition

Programming Instructor - Addity — Jul 2016 - Aug 2016

- Implemented Lego Mindstorms activities and taught 33 students about the **fundamentals of robotics**
- Configured Gradle automation system with Windows batch files to build and host project workspaces
- Led the WordPress course for 27 students and integrated HTML and CSS to deepen the program

Computer Technician - Y2K Computers — Jul 2015 - Aug 2015

- Prioritized client specifications and built custom-made desktops to **boost company revenue by 80%**
- Utilized BIOS firmware for OS updating and component testing to improve overall performance
- Applied troubleshooting to effectively repair system errors, intrusive software, and hard drive failures

Projects

Autonomous Graphing Calculator - (C++, C)

- **Optimized** a **three-axis system** by lowering plotting time of user-defined functions to under 45 seconds
- Programmed immediate reset feature allowing multiple iterations to **minimize human dependency**

Sign Language Translator - CUHacking (Python, JavaScript)

- Built a sign language recognition system via **Leap Motion** technology with incorporated video chat
- Won Indico's Challenge for **best use of machine learning** through SVMs and the scikit-learn library

Traffic Count Simulator - (C++, OpenCV)

- Created an application enabling users to upload traffic video and have the data tracked at **96% accuracy**
- Employed **computer vision** and **image processing** techniques to separate static from dynamic instances

League Bot - (Python, Twitter API)

- Developed an **automated Twitterbot** with parsed tweeting via HTTP requests and selective retweeting
- Integrated with Riot Games API to provide followers with daily statistics of the game's best players

Keypad Door Lock - (C++, Arduino)

- Designed a password-based electromagnetic device for access control and security management
- Implemented **switch debouncing software** to eliminate multiple key presses and increase reliability

Education

University of Waterloo — Sep 2016 - Present

- Candidate for Bachelor of Applied Science (B.A.Sc.) in Honours Mechatronics Engineering