Martín **Vuelta**

SOFTWARE DEVELOPER · RESEARCHER

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Summary

Co-founder and director of Software Research and Development at SoftButterfly. With more than 5 years of experience in software development and 3 years of experience in both computer security and cloud infrastructure.

I like science and I am always looking for the best way to solve theoretical or experimental problems by applying information technology to achieve a better understanding of the world.

Studies

Universidad Nacional Mayor de San Marcos   *Lima, Perú*

B. S. EN FÍSICA   *Mar. 2008 - PRESENT*

Skills

Programming	Python, C, C++, C#, Fortran, Matlab, Mathematica, JavaScript, LaTeX, Java, Julia, Kotlin
Libraries	LAPACK, BLAS, Intel MKL, ILnumerics, OpenCV, Cuda, OpenGL, SFML
Hardware	Arduino, Raspberry Pi
Mobile	Android
Web	Wagtail, Django, Flask, Express, HTML5, CSS3, SASS, Gulp
Databases	MySql, MariaDB, PostgreSql, Redis, SQLite
Cloud	Amazon Web Services, Google Cloud Platform, IBM Bluemix
Languages	Español, Inglés

Experience

SoftButterfly   *Lima, Peru*

CO-FOUNDER AND DIRECTOR OF SOFTWARE RESEARCH AND DEVELOPMENT   *Feb. 2017 - PRESENT*

- New Relic instrumentation in conjunction with Atentus for the Interbank BPI website in VueJs.
- New Relic implementation in conjunction with Atentus for Sura's internal management systems.
- Development of and *eLearning* platform with Django, Wagtail, Bootstrap and PostgreSQL.
- Development of a survey generator and alalysis system with Django, Django RestFramework, VueJS and PostgreSQL.
- Infrastructure implementation of internal SoftButterfly systems using various tools from the AWS stack.
- Research and development of meteorological stations using commodity hardware and a customized IoT system with Django, Django RestFramework, Bootstrap and PostgreSQL.
- Research for the development of a monitoring and recovery system for meteorological balloons.
- Research for the development of a mosquito characterization system by the frequency of its flutter.

National Service of Meteorology and Hydrology of Perú - Senamhi   *Lima, Peru*

EXTERNAL FORTRAN CONSULTANT   *Nov. 2017 - May. 2018*

- Fortran Training
- Development of data analysis programs.

HackSpace Perú   *Lima, Perú*

LEAD TRAINER   *Jan. 2015 - Dec. 2019*

- Full stack web development coach at the PADT 2017 (High Technological Performance Program) in collaboration with the Ministry of Production of Peru.
- IoT coach of the CoreUpgrade 2017 face-to-face training.
- Backend development coach of the CoreUpgrade 2016 face-to-face training.

HackSpace Perú   *Lima, Perú*

LEAD SOFTWARE DEVELOPER   *Mar. 2016 - PRESENTE*

- Planning, design, development and implementation of the entire web infrastructure of HackSpace Peru.
- Implementation of e-Learning system for the CoreUpgrade 2017 annual training program.

Grupo RPP

Lima, Perú

Web Developer Freelance

Ago. 2017 - Sep. 2017

- Development of interactive web visualizations using GreenSock, D3JS and HighCharts.
  - Las cifras del caos.
  - El viaje de la papeleta..
  - Las victimas mortales.
  - Cinco años de tragedias.

DGT Digital

Lima, Perú

IT Security and Web Development Consultant with Python

Feb. 2017 - Mar. 2017

- Web development training backend with Python and Django.
- Computer Security Training following the OWAS Standard to improve the security of your computer systems.
- Training of use and configuration of Nginx and SSL.

UnionLabelNet

Lima, Perú

Dynamics NAV Developer

Dic. 2016 - Mar. 2017

- ERP system developer with Microsoft Dynamics NAV.
- Development of the VSCode C-AL plugin to improve the efficiency in Microsoft Dynamcis NAV C-AL programming.

HackSpace Perú

Lima, Perú

Software Developer

Nov. 2015 - Nov. 2016

- Frontend development of HackSapce web services.
  - Promotional Website for Community Training 2015
  - Promotional Website for the CoreUpgrade 2016

National Aerospace Research and Development Commission - Peru Space Agency

Lima, Perú

Research assistant trainee

Apr. 2014 - Dec. 2015

- Research on algorithms for predicting solar activity.
- Development of meteorological monitoring systems.
- Automation calculation of ephemeris.

DJEngineering

Lima, Perú

Software Developer

Jul. 2015 - Jul. 2016

- Support and development of features in backend and frontend of web systems.

Metrología y Técnicas CP

Lima, Perú

Metrology Technician

Jul. 2013 - Dic. 2013

- Metrology technician for the calibration of equipment for measuring mass, length, time, volume, temperature, humidity and force.
- Automation of calibration data analysis using Matlab.
- Preparation of measurement scripts and sieve calibration report template following the specifications of NTC 32 (Colombian Technical Standard)

Pro Ciencia

Lima, Perú

Teacher

Mar. 2013 - Jun. 2013

- Teacher of the Chemistry course of secondary and primary level.

TRENTO

Lima, Perú

Teacher

Jun. 2012 - Dic. 2012

- Physics and Chemistry teacher high school level.

TRENTO

Lima, Perú

Teacher

Abr. 2009 - Ago. 2009

- Academic advisor of the courses of Arithmetic, Algebra, Geometry, Trigonometry, Mathematical Reasoning, Physics and Chemistry of secondary level.

Reconocimientos

2016	**6to Lugar**, II Programming Contest - IEEE Brain Coding 1.5	*Perú*
2015	**Reconocimiento**, For participation in the event " Creating, Innovating: Technological solutions for a more representative congress " organized by the Congress of the Republic of Peru	*Lima, Perú*
2014	**Microsoft Active Professional**, Microsoft	*Lima, Perú*
2013	**Microsoft Active Professional**, Microsoft	*Lima, Perú*
2012	**Microsoft Active Professional**, Microsoft	*Lima, Perú*

Ponencias

Basic security measures for servers
Universidad Privada del Norte, Lima, Perú

I Forum of Technologies and Entrepreneurship
Jun. 2017

- Practical guides for configuring security headers for web servers with emphasis on nginx.

Cellular Automata with Python
Universidad Privada del Norte, Lima, Perú

Code Day
May. 2017

- On how I deepened my interest in cellular automata after watching the video "I'm humanity" by Etsuko Yakusimaru. Practical examples of cellular automata made in Python.
- ⭘ Github: `https://github.com/zodiacfireworks/code-day-2017--cellular-automata`

Jupyter Notebook: An Interactivo Programming Environment
Universidad Privada del Norte, Lima, Perú

Flisol Lima
May. 2017

- About the use of Jupyter notebook in teaching and in advanced real-work environments. Practical examples in mathematics and data analysis with Spark.
- ⭘ Github: `https://github.com/zodiacfireworks/talk--jupyter-notebook`

Fedora, Python y Arduino
Puno, Perú

FUDCON: Fedora Users and Developers Conference
Oct. 2016

- On how to build a desktop application with Python and Qt for the collection of data from various sensors connected to an Arduino board.
- ⭘ Github: `https://github.com/zodiacfireworks/arduino-serial-monitor`

High performance computing with Python
Universidad de Piura, Piura, Perú

XXIII INTERCON International Congress of Engineering, Electronics, Electrical and Computing
Ago. 2016

- Introductory workshop to high performance computing in Python.
- ⭘ Github: `https://github.com/zodiacfireworks/talk--jupyter-notebook`

Algoritmos computacionales para el análisis de actividad solar.
Piura, Perú

Encuentro científico internacional
Jul. 2015

Solar cycle forecasting.
Cusco, Perú

X Conferencia Latinoamericana de Geofísica Espacial
Sep. 2014

Sobre el problema gravitacional inverso en gravedad newtoniana.
Cusco, Perú

XI Simposio Peruano de Física y V Congreso Peruano de Física Médica
Oct. 2012

Movimiento de partículas cargadas en campos electromagnéticos.
Cusco, Perú

XI Simposio Peruano de Física y V Congreso Peruano de Física Médica
Oct. 2012

Simulaciones Magnetohidrodinámica en física del plasma.
Cusco, Perú

XV Simposio Nacional de Estudiantes de Física
Nov. 2011

Cursos

The SCOSTEP/ISWI ISSS
Lima, Perú

Instituto Geofísico del Perú
Sep. 2014

Arduino
Lima, Perú

Universidad Nacional de Ingeniería
Ene. 2013

Programación Científica con MatLab
Lima, Perú

Laboratorio de Física de Eventos Naturales
Ene. 2013

5th School of Cosmic Rays and Astrophysics

La Paz, Bolivia

Universidad Mayor de San Andrés

Ago. 2012

CETQ-Fermilab School QCD and Electroweak phenomenology

Lima, Bolivia

Pontificia Universidad Católica del Perú

Jul. 2012 - Ago. 2012

Curso de Gestión Organizacional

Lima, Perú

PROPOLI, MIMDES y la Unión Europea.

Nov. 2006 – Mar.2007