

Martín Vuelta

SOFTWARE DEVELOPER · RESEARCHER

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Summary

Co-founder and director of Software Research and Development at SoftButterfly. With more than 6 years of experience in software development and 4 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

B. S. EN FÍSICA

Lima, Perú

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

CO-FOUNDER AND DIRECTOR OF SOFTWARE RESEARCH AND DEVELOPMENT

Lima, Peru

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 an eLearning platform with Django, Wagtail, Bootstrap and PostgreSQL.
- Development of a survey generator and analysis 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

EXTERNAL FORTRAN CONSULTANT

Lima, Peru

Nov. 2017 - May. 2018

- Fortran Training
- Development of data analysis programs.

HackSpace Perú

LEAD TRAINER

Lima, Perú

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

LEAD SOFTWARE DEVELOPER

Lima, Perú

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

WEB DEVELOPER FREELANCE

Lima, Perú

Ago. 2017 - Sep. 2017

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

DGT Digital

IT SECURITY AND WEB DEVELOPMENT CONSULTANT WITH PYTHON

Lima, Perú

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

DYNAMICS NAV DEVELOPER

Lima, Perú

Dic. 2016 - Mar. 2017

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

HackSpace Perú

SOFTWARE DEVELOPER

Lima, Perú

Nov. 2015 - Nov. 2016

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

National Aerospace Research and Development Commission - Peru Space Agency

RESEARCH ASSISTANT TRAINEE

Lima, Perú

Apr. 2014 - Dec. 2015

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

DJEngineering

SOFTWARE DEVELOPER

Lima, Perú

Jul. 2015 - Jul. 2016

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

Metrología y Técnicas CP

METROLOGY TECHNICIAN

Lima, Perú

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

TEACHER

Lima, Perú

Mar. 2013 - Jun. 2013

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

TRENTO

TEACHER

Lima, Perú

Jun. 2012 - Dic. 2012

- Physics and Chemistry teacher high school level.

TRENTO

TEACHER

Lima, Perú

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


I FORUM OF TECHNOLOGIES AND ENTREPRENEURSHIP

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

Universidad Privada del Norte,
Lima, Perú
Jun. 2017

Cellular Automata with Python


CODE DAY

- 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>

Universidad Privada del Norte,
Lima, Perú
May. 2017

Jupyter Notebook: An Interactive Programming Environment


FLISOL LIMA

- 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>

Universidad Privada del Norte,
Lima, Perú
May. 2017

Fedora, Python y Arduino


FUDCON: FEDORA USERS AND DEVELOPERS CONFERENCE

- 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>

Puno, Perú
Oct. 2016

High performance computing with Python

XXIII INTERCON INTERNATIONAL CONGRESS OF ENGINEERING, ELECTRONICS, ELECTRICAL AND COMPUTING

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

Universidad de Piura, Piura, Perú
Ago. 2016

Algoritmos computacionales para el análisis de actividad solar.

ENCUENTRO CIENTÍFICO INTERNACIONAL

Piura, Perú
Jul. 2015

Solar cycle forecasting.

X CONFERENCIA LATINOAMERICANA DE GEOFÍSICA ESPACIAL

Cusco, Perú
Sep. 2014

Sobre el problema gravitacional inverso en gravedad newtoniana.

XI SIMPOSIO PERUANO DE FÍSICA Y V CONGRESO PERUANO DE FÍSICA MÉDICA

Cusco, Perú
Oct. 2012

Movimiento de partículas cargadas en campos electromagnéticos.

XI SIMPOSIO PERUANO DE FÍSICA Y V CONGRESO PERUANO DE FÍSICA MÉDICA

Cusco, Perú
Oct. 2012

Simulaciones Magnetohidrodinámica en física del plasma.

XV SIMPOSIO NACIONAL DE ESTUDIANTES DE FÍSICA

Cusco, Perú
Nov. 2011

Cursos

The SCOSTEP/ISWI ISSS

INSTITUTO GEOFÍSICO DEL PERÚ

Lima, Perú
Sep. 2014

Arduino

UNIVERSIDAD NACIONAL DE INGENIERÍA

Lima, Perú
Ene. 2013

Programación Científica con MatLab

LABORATORIO DE FÍSICA DE EVENTOS NATURALES

Lima, Perú
Ene. 2013

5th School of Cosmic Rays and Astrophysics

UNIVERSIDAD MAYOR DE SAN ANDRÉS

La Paz, Bolivia

Ago. 2012

CETQ-Fermilab School QCD and Electroweak phenomenology

PONTIFICIA UNIVERSIDAD CATÓLICA DEL PERÚ

Lima, Bolivia

Jul. 2012 - Ago. 2012

Curso de Gestión Organizacional

PROPOLI, MIMDES Y LA UNIÓN EUROPEA.

Lima, Perú

Nov. 2006 – Mar.2007