

Martín Vuelta

SOFTWARE DEVELOPER · RESEARCHER

Av. Metropolitana 743, Comas, Lima, Perú

☎ (+51) 982042088 | ✉ martin.vuelta@gmail.com | 🌐 zodiacfireworks | 📄 martinvuelta

Summary

Co-founder and Director of Development and Technology Research at SoftButterfly.

I like science and I am always looking for the best way to solve theoretical, experimental and technical problems through the application of computer science to achieve a better understanding of the world.

Experience

SoftButterfly

Lima, Perú

CO-FOUNDER AND DIRECTOR OF DEVELOPMENT AND TECHNOLOGY RESEARCH

Feb. 2017 - PRESENT

- Development of projects Cabildos Bicentenarios and El País Que Queremos, with Django, Django RestFramework, Wagtail, React, Tailwind, Sass, PostgreSQL and Redis.
Commissioned by the Ministry of Culture of Peru In collaboration with HackSpace and Crehana.
<https://bicentenario.gob.pe/cabildos/>
<https://bicentenario.gob.pe/elpaisquequeremos/>
- Quantum Variational Eigensolver for ground state energy determination in small molecules.
<https://github.com/zodiacfireworks/qiskit-vqe-benchmarking>
- Design and development of a system for the diagnosis, registration and monitoring of COVID-19 tests for the Repromedic clinic.
- Development of an eCommerce with Django, Django RestFramework, VueJS, PostgreSQL and Redis for Quimder.
<https://tienda.quimder.com/>
- Research and development of tools for the migration of dashboards from DataDog to New Relic and its use in New Relic One.
- Installation of New Relic APM and Infrastructure agents in conjunction with Atentus for Interbank systems.
- 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

Lima, Perú

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 víctimas mortales.
 - Cinco años de tragedias.

DGT Digital

IT SECURITY AND WEB DEVELOPMENT CONSULTANT WITH PYTHON

- 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.

Lima, Perú

Feb. 2017 - Mar. 2017

UnionLabelNet

DYNAMICS NAV DEVELOPER

- 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.

Lima, Perú

Dic. 2016 - Mar. 2017

HackSpace Perú

SOFTWARE DEVELOPER

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

Lima, Perú

Nov. 2015 - Nov. 2016

National Aerospace Research and Development Commission - Peru Space Agency

RESEARCH ASSISTANT TRAINEE

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

Lima, Perú

Apr. 2014 - Dec. 2015

DJEngineering

SOFTWARE DEVELOPER

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

Lima, Perú

Jul. 2015 - Jul. 2016

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 |

Studies

Universidad Nacional Mayor de San Marcos

B. S. EN FÍSICA

Lima, Perú

Mar. 2008 - Feb. 2021

Cursos

Qiskit Global Summer School

IBM

- Certificate of Quantum Excellence

Online, Global

Jul. 2020

The SCOSTEP/ISWI ISSS

INSTITUTO GEOFÍSICO DEL PERÚ

Lima, Perú

Sep. 2014

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

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 Interactive 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.

Lima, Perú

ENCUENTRO CIENTÍFICO INTERNACIONAL

Jul. 2015

Solar cycle forecasting.

Cusco, Perú

X CONFERENCIA LATINOAMERICANA DE GEOFÍSICA ESPACIAL

Sep. 2014

Reconocimientos

- | | | |
|------|---|-------------------|
| 2016 | 6to Lugar , II Programming Contest - IEEE Brain Coding 1.5 | <i>Perú</i> |
| 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 | <i>Lima, Perú</i> |
| 2014 | Microsoft Active Professional , Microsoft | <i>Lima, Perú</i> |