

Diego Román Berrocal Chinchay

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PROFILE

I am an outgoing person who loves physics and a self-taught programmer, but what I love the most is applying this knowledge to create tools that make our lives easier. I crave for challenges in every aspect of life, and throughout my existence I have always pushed myself to my limits, out of my comfort zone. I enjoy traveling throughout my country, discovering new places, and making friends everywhere. I can't help but share everything I learn.

EDUCATION

NATIONAL UNIVERSITY OF ENGINEERING (UNI)

PHYSICS | CLASS OF 2015

- Major: Physics
- Specialties: Astronomy and Computer Science
- GPA:4
- Top 20% of Department of Physics

SKILLS

Languages

- Spanish – Native
- English Level B2 – FCE (First Certificate in English) Grade A - Cambridge ESOL
- French – Level C2 - Alliance Française de Lima

Computer Languages

- | | | | |
|-----------|-------------|--------|-------------|
| ● C/C++ | Java Script | HTML | CSS |
| ● Java | Ruby | PHP | Python |
| ● Clojure | Elisp | Elixir | Common Lisp |

EXPERIENCE

PAUL AYERS GROUP | MCMASTER UNIVERSITY, CANADA

The aim of this group is to develop new theoretical, computational, and conceptual methods for understanding, interpreting, predicting, and quantifying chemical phenomena. The tools they develop are applicable to a wide range of chemical processes, including drug design and medicinal chemistry, nuclear waste reprocessing and remediation, and catalysis.

RESEARCH STUDENT | JANUARY 2015-PRESENT

As part of a peruvian program that lets undergraduates participate in research groups among the best universities in the world Diego had the opportunity to work with Paul Ayers which is one of the leader in the field of Quantum Chemistry and Atoms in Molecules Theory.

- Implement a new watershed algorithm for partitioning following guidelines from the Quantum Theory of Atoms in Molecules (QTAIM)
- Use horton, the framework developed by the group which is in Python, Cython, C++ and Fortran and also use SHARCNET supercomputers to process the information needed.
- Publish comparison of the new implementation with other ones (Work in Progress)

HACKSPACE UNI | FABLAB UNI

This space aims to train people (free of charge) in different areas of software development and to be a development center for students, researchers, and professionals in general.

FACILITATOR | JANUARY 2014-PRESENT

- Help people with the problems they encounter when they develop their ideas.
- Research, digest, and apply state-of-the-art technology.
- Teach new technologies or innovative uses of current technology to groups of 15 people.

GRUPO ASTRONOMÍA | FACULTAD DE CIENCIAS-UNI

Student association dedicated to astronomy research and divulgation in Peru.

PRESIDENT | July 2012 -

- Plan, execute, and manage every activity in the organization, including seminars, workshops, scientific divulgation, school talks, and community service.
- Organize yearly field research activities in the Afari National Observatory at Tarma, Junin.
- Organize workshops to educate the general public about the importance of Astronomy.
- Invite international speakers to present the situation of astronomy in their countries.
- Raised funds (US\$30,000) to purchase an optical telescope and other equipment for the creation of the Astronomy Observatory UNI in coordination with the World Academy of Sciences.

GMAT DUDES S.A.C.

An education/e-learning enterprise specialized on international English exams such as the GMAT, GRE, and TOEFL.

CHIEF SOFTWARE DEVELOPER | FEBRUARY 2014-PRESENT

- Researched and experimented with state-of-the-art web technologies such as AppEngine, LocalStorage, HAProxy, and Docker for Virtual Machine Manipulation in order to develop the most efficient e-learning software.
- Designed the website and e-learning platform.
- Developed the database schema and a REST webserver in Django.
- Currently maintaining the webserver of the platform, improving the system and making sure that everything works to perfection.

ALEPH GROUP & ASOCIADOS S.A.C.

Company specialized on ionizing radiation applications in several industries such as Mining, Environmental, and Medical.

LAB ASSISTANT AND SYSTEMS MANAGER | 2010 – 2012

- Maintained and supported electronic equipment as well as acquisitions of new computers.
- Communicated with suppliers and managed the import of radioactive material for research and calibration of measuring equipment.
- Researched the use of discontinued measuring equipment to replicate the usability of newer equipment.

OTHER ACTIVITIES

- Member of the Peruvian Science Divulgators Network, an organization that plans activities that involve the diffusion of scientific knowledge to rural areas in Peru, schools, and universities. (2012-Present)
- Participated in an Astrophotography Workshop with the astrophotographer Vlad Dumitrescu (2014) (<http://www.vladdumitrescu.com/above/stars.html>)
- Participated in the Lima Hackaton 2014, achieving the second place (2014)
- Attended a Coaching Workshop by the Personal and Professional Development Commission for the best students of the careers of the National University of Engineering (2010)
- First Guitar of Corisonqo, my first music band (2010)

REFERENCES

DR. ROLANDO PAUCAR JÁUREGUI – President of ALEPH Group & Asociados S.A.C.

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MARIANO AGUILAR VELA – CEO of GMAT Dudes S.A.C.

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ALVARO CONCHA – Director of HACKSPACE UNI

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