# Cesar Conopoima



## Programmer and mechanical engineer

#### Contact **Formal Education**

La California Sur. Caracas-Venezuela. 2007-2013 Mechanical Engineer at Universidad Simón Bolivar Caracas-Venezuela

Formation Domain: Mechanics of rigid bodies, and fluid dinamics

Numerical formulations to solve problems, specially computational fluid dynamics

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International Student

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2012-2013 One full year as international student, at the department of Mechanical Engineer Development.

Studies in contact mechanics and tribology.

#### Language

**Programming** 

Ruby-Ruby On Rails

### **Work Experience**

English and French Fluency German Basic Spanish mother tongue

July-2014 Software Developer at Funindes. (Research & Development Foundation at Universidad -Present Simón Bolívar)

#### - Compressors - In field Measurement - Programming.

Stand alone application to compute operational point and performance map of centrifugal and reciprocating compressors, installed in gas production facilities.

This project included, in field measurements and analysis of systems.

Selection and implementation of suited technology to develop the product in short time.

Back-end and front-end programming in visual basic.

Clients were 3 gas production facilities in the east side of Venezuela.

# **Numerical Simulation**

#### at Universidad Simón Bolívar) Jan-2014 - CFD - Numerical Models Research

HTML-CCS Python-C++

Matlab

July-2014 Performing numerical simulations of multiphase flow in ANSYS CFX.

ANSYS-CFX Matplolib-Numpy from Python Studying phase separation process in oil-water skimmer. The study included: in depth study of available numerical models that apply to the physical phenomena, selection of pertinent models to study coalescence, and separation of oil.

Computational Fluid Dynamics Engineer. at Funindes. (Research & Development Foundation

This project was developed to understand and improve operation of skimmer separator installed in an oil production field in Rubiales, Colombia.

#### **Personal Statement**

#### Programmer at the quality control department at Scan Geofísica - Programming - Ruby - SQL

I'm an engineer who knows how to solve problems. I feel very comfortable addressing engineering problems with a programming mindset. I really enjoy working in a stimulating environment that pushes me to new areas of knowledge. I consider myself a very

pragmatic person with a strong result

Software development - Web application

Developing and refactoring code in ruby language and SQL, to improve productivity and performance of the quality control process.

orientation.

May-2013 Involved in a project to control over 150 TB of seismic data (SEG-D and SEG-Y formats).

Aug-2013

#### Computational Fluid Dynamics Junior Researcher, Research & Development Department. at General Electric Oil & Gas Thermodyn

### - CFD - Turbomachinery - Data analysis

Improving axial thrust prediction in centrifugal compressors. Performing numerical simulations with local software, to study and analyze secondary flows in cavities and labyrinth seals. Results and generated models were validated with experimental data.

Analyzing and exploiting experimental data to determine correlations and patterns, that finally allow engineers to calculate axial forces driven axial thrust in centrifugal compressors.

This project was developed in France. The communication with team members was in French and the final memory was written in English.

Numerical Simulations - Computational

development - Programming

**Professional interests** 

May-2012 This project was presented in Venezuela as the final dissertation to obtain the Mechanical

Aug-2012 Engineer diploma, been qualified as an outstanding work.

## Fluids Dynamics **Personal interests**

#### Job as freelancer - Programming - Ruby on Rails - SQL - HTML5 - CCS

## Alpinism - Soccer

Developing web application for e-commerce, in ruby on rails, with postgresql as db manager, programming of front end and back end, in constant communication with client, to satisfy all needs in real time. Application deployed in heroku could be found in

american-parts.herokuapp.com