Sergio Botero

Software Developer

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Profile

Software Engineer with experience in Scientific computing using Python.

Worked with an academic computer cluster doing installation, maintenance and support. Almost 600 cores.

Product development done in multiple languages, recently including Ruby, Elixir and some Golang.

Interests include Highly Available Systems, Automation and Monitoring.

Experience

Ride Inc / Software Engineer
OCTOBER 2014 - PRESENT, REMOTE

Engineer working on multiple backend applications. Used Javascript, Golang and Ruby on the first version of the application. Ruby and Elixir on a second version.

Responsible for the integration of core business algorithms to allow users get matched with potential carpoolers. Achieving up to 53% more matches than the previous solution.

Promoted the adoption of automated environments for development and tests using Docker.

Created services to help resolve application bottlenecks and also integrated services when possible. Migrated our batched approach for matching, that would take approx. 2 minutes, to a per request instant approach.

Worked on the technical design and implementation of the initial iterations of a chat based tool to manage carpools.

Part of the team responsible for adding capabilities to a carpool assistant and the availability and reliability of that service.

Universidad EAFIT / Python Developer
MARCH 2013 - JUNE 2014, MEDELLÍN, COLOMBIA

RISE Research Group:

Maintainer of the Open Source project Clusterpy (Library of spatially constrained clustering algorithms).
Algorithms used in Regional Science.

Designed and developed optimizations for Clusterpy to make the most out of the shared computer cluster available at the university. In some cases we got results in 5 hours which before would take 3-4 days.

Developed scripts to support consultant work with local government agencies.

MIT / Visiting Scientist
OCTOBER 2012 - JANUARY 2013, CAMBRIDGE, MA

CECI Laboratory in partnership with EAFIT's Research in Computer in Education Lab:

Gateway4labs project.

Project to integrate multiple Remote laboratory systems (e.g. iLabs, Deusto) in different Learning Management Systems, and allow students to access remote laboratories from their course contents.

39 Inc / iOS Developer
MAY 2012 - SEPTEMBER 2012, REMOTE

Part-time Remote position.

Designed and developed new applications from requirements to implementation (defining scope and API).

Developer of new features for existing apps and providing updates based on client's requests.

Universidad EAFIT / Research Assistant
JANUARY 2011 -JULY 2012, MEDELLÍN, COLOMBIA

APOLO High Performance Computing:

High performance computing cluster installation and networking, almost 600 cores for the first stage of the project.

Managed installation and availability of scientific software packages and applications.

Helped reduce the research time for a Tropical Disease Center in Medellín from more than a decade to almost 2 years by enabling and configuring backfilling jobs on the cluster.

Provided support to research laboratories at EAFIT and to modify and execute research experiments making use of computer clusters.

Received training on the Hubzero project at Purdue University.

R+D in Computer in Education:

Research intern position. Project to explore new technologies applied to education in rural areas.

Education

Universidad EAFIT / Bachelor's Degree, Computer Software Engineering
JANUARY 2011 - 2012, MEDELLÍN, COLOMBIA

Member of special interests groups in programming contests (ACM-ICPC).