Sergio Botero
Software Developer

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Profile

Engineer focused on maintenance and infrastructure of production services at Splice.

Experience in Scientific computing using Python.

Worked with an academic computer cluster doing the installation, maintenance, and support. Cluster size was about 600 cores.

Experience with product development in multiple languages, recently including Golang.

Experience

Splice.com / Software Engineer in Infrastructure
APRIL 2018 - PRESENT, REMOTE

Working with the infrastructure team managing resources in AWS with

Terraform and Ansible.

Helping the team with zero downtime database migrations.

Setup and configuration of Jenkins jobs and nodes.

Provide and maintain compute resources for the development team

(connectivity bastions, test nodes, processing nodes).

- Currently working with the infrastructure team. Managing resources in

AWS with Terraform and Ansible.

Worked in tuning an Elascsearch cluster critical for the business.

- Search/query response time is now 55% faster in average response

time.

- Reduced from ~175k requests with failed shards to 0.

- The most time-consuming endpoint got an 80% improvement in

response time.

- One two-week iteration.

Splice.com / Backend Software Engineer
SEPTEMBER 2016 - APRIL 2018, REMOTE

Responsibilities involve maintenance of production services.

Perform changes to ensure availability and reliability of the service.

Feature development for a Golang backend application.

Ride Inc / Software Engineer

An 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).

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

Universidad EAFIT / Research Assistant

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 2007 - JUNE 2012, MEDELLÍN, COLOMBIA

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