

SIMÓN ESCOBAR BENITEZ

• sescobb27@gmail.com • Github: <https://github.com/sescobb27>

EDUCATION

Universidad EAFIT (Medellín, Colombia) Software Engineer

WORK HISTORY - 10 YEARS OF EXP

Fox - TubiTV (San Francisco/Remote) (2020-2, Current)

Software Engineer

- ***Fox - TubiTV*** Tubi is an American content platform and ad-supported streaming service owned by Fox Corporation that is trying to compete with industry giants like Netflix and Hulu.
- ***Bought from Erlang Solutions*** I was working at Erlang Solutions as a contractor for TubiTV, but they liked my work so much, that they paid Erlang Solutions to be able to hire me directly as an employee.
- Part of 6 people team, that have growth to 12, at the beginning we were 3 developers, 1 video engineer, 1 product manager and 1 engineer manager, but now we are 6 developers, 4 video engineers, 1 product manager and 1 engineer manager, distributed across United States, Colombia (Me) and China, I report to the engineer manager.
- I have been in charge of designing and implementing the second version of the distributed system running hundred of thousands of distributed background jobs in parallel backed by GRPC, Postgresql and Oban, helping them save hundreds of thousands of dollars per year in storage and processing by optimizing pipelines, paralleling them and an distributing them across many nodes in the cluster.
- I optimized all the DB operations and make them composable via Ecto.Multi, implemented retry strategies for long and expensive jobs, garbage collection of intermediary files and pruning unnecessary garbage from S3, traced and fixed long lived errors in production, improved the test coverage of each service.
- I re-designed and improved the supervision tree architecture and restart strategies of the main parts of the system.
- I co-designed and implemented new service in-charge of our content legal policies synchronization with Fox's legal system.
- I built a parser combinator to convert content policies from plain text to an structured format to our integration with Fox's legal software
- I back filled petabytes of data into multiple storages and make them available through multiple CDNs (Cloudfront/Fastly)
- I re-processed petabytes of files from multiple storage providers to backfill DB with newly needed data in a streaming fashion.
- I migrated the entire cluster from EC2 to Kubernetes with rolling updates and auto-scaling policies.
- We haven't have any major issue or any service disruption.
- I implemented safe migrations best practices so we don't have any downtime on DB migrations.

Erlang Solutions (London/Americas Team - Remote) (2018-2, 2020-2)

Software Engineer

- ***Erlang Solutions*** is a software agency company focused on building fault-tolerant and resilient systems that can scale to billions of users using its Erlang & Elixir expertise.
- Part of 4 people team, 3 developers and one office manager, reporting to the office manager.
- ***Elixir Consultancy*** Worked with an educational game company to diagnose server crashes at peak hours, instructed in-house team how to resolve issues while implementing load contention on GenServers, properly use caching with ets tables, organize supervision architecture, reduce the number of queries to the database to a minimum by taking advantage of transactions and pre-loading associations, start using multiple distributed nodes with pg2 and distributing processes across those nodes, install monitoring tools to prevent and diagnose future problems.
- ***Elixir Consultancy*** Worked with a major car manufacturer to deliver the next version of their car rental and sharing platform by delivering features and increasing its code coverage by 25%.
- ***Elixir Consultancy*** Worked with a network company delivering multiple services in an micro-service oriented architecture for routing and connecting big gaming companies' servers throughout the world; among our responsibilities was to increase the test coverage of all of those micro-services, to increase confidence delivering more products and features, parse and import RADB in a streaming fashion into an ets table, and make it query-able, connect multiple services and APIs through GRPC, built a distributed PubSub architecture using Phoenix.PubSub for handling hundreds of thousands of subscribers across more than 30 nodes using proxy processes de decrease the network congestion, add support for their services to support read/write postgresql replicas, and built a GRPC proxy for admins to interact with GoBGP.
- ***Elixir Consultancy*** Worked with ***Fox - TubiTv*** a major video streaming service helping them to scale and implement their video processing platform which is composed of multiple big services, each service having its own cluster composed of many nodes (on peak time we have more than 200 nodes in total), in-charge of Media Parsing, Media Transcoding, Packaging, QA and Delivering final media streams to storage providers in order to stream those results in multiple media formats, qualities, resolutions and video streaming formats. (More Information in Fox - Tubi Section)
- ***OSS Work*** Author of https://github.com/esl/ex_rabbit_pool, https://github.com/esl/ex_docker_build, https://github.com/esl/buildex_poller and https://github.com/esl/buildex_jobs

Expedition (San Francisco/Remote) (2017-2, 2018-2)

Software Engineer

- **Expedition** is a service for connecting pockets of people and digging down deep into emerging markets in cities that are rising up, recognizing the people pushing things forward, telling their stories and connecting those stories to actionable things.
- Joined as second technical hire, reporting to the CTO.
- Part of 3 people team for the back-end and front-end.
- Worked on implementing the first version of Expedition with Elixir, Phoenix Postgresql in the back-end and EmberJS in the front-end.
- Designed and developed a place scraper and aggregator system using background jobs with GenStage for background processing, place aggregation and persistence into the DB.
- Designed and developed the payment system integration with Stripe managing subscriptions and developed it using finite state machines for managing idempotency and state management.
- Developed a simple search system for finding places by current location or by name using postgresql fuzzy searching, full text searching and haversine formula for coordinates comparison.

Elizabeth & Clarke (New York/Remote) (2015-2, 2017-2)

Lead Software Engineer

- **Elizabeth & Clarke** is an on-line subscription based fashion store
- Joined as first technical hire, reporting to the CTO and Founder.
- Worked on implementing the second version of Elizabeth & Clarke with NodeJS and MongoDB in the back-end and EmberJS in the front-end with stripe as out payment gateway.
- Defined initial server and web architecture which was continuously iterated on without the need for re-architectures or major re-writes.
- Responsible for web and server platform architecture and infrastructure.
- Mentor and train the second technical hire in platform architecture, infrastructure and back-end development.
- Designed and developed the behavioral state machine that controls all our operations including order state management, subscriptions, billing management and customer management.
- Designed and developed (Dollarico) an internal automation tool to automate the process of delivering new seasons through time, so we can run a year in 1 day including product releases, payments, reports and more.
- Reported to the CTO and Founder.

Make it Real (Medellín) (2017-1, 2017-1)

Teacher

- **Make it Real** is a Full-Stack bootcamp
- Taught about Ruby, OOP with Ruby, Sinatra, Rails, Databases, SQL and JavaScript

Talos Digital (Medellín Colombia) (2014-2, 2015-1)

Software Engineer

- **Convenience Select**: The project was about Team management and Loan service for kid's sport teams. The teams were able to outsource all the payment and e-commerce services through the application.
- Full-stack Developer using MEAN framework (MongoDB, ExpressJS, AngularJS and NodeJS).
- Developed all client side logic and interactions using AngularJS.
- Developed a Loan service and Payment Gateway Adapter.
- Developed a cron based services for charging users.
- **Scanther**: The project was about building mobile web sites and native applications dynamically and easily for non-dev customers.
- Full-stack Developer using Firebase, AngularJS and NodeJS
- Developed all business logic in AngularJS using Firebase as a web service which is a realtime nosql database.
- Developed a NodeJS proxy for all our integration with our Payment Gateway including webhooks. Also this proxy serves all our integration with Urban Airship for all our notifications to mobile devices.
- Built the production environment in AWS EC2.

**Universidad EAFIT (Medellín Colombia) High Performance Computing Research Center
APOLO (2014-1, 2014-2)**

Research assistant

- Research Assistant in High performance computing based on Open Source technologies
- Operative System: we work on "Rocks Cluster" based on CentOS 6.1
- As a System Administrator I was in charge of job submission queues using torque and maui as a scheduler, compilation and installation of large and modular software.
- Built Sys-Admin tools with Ruby, Python and Bash Script.

Universidad EAFIT (Medellín Colombia) (2014-2)

Teacher Assistant

- Integration Project 2
- Assist students on Web Application Development, Continuous Integration, Continuous Delivery and TDD.

Universidad EAFIT (Medellín Colombia) (2013-2, 2014-2)

Teacher Assistant

- Integration Project 1
- Assist students on Android Application Development, Web Services and 3rd party integrations.

SmartOut (Half Time - Remote) (2013-1, 2014-1)

Software Engineer

- Developed a **Ruby on Rails - Postgresql - EmberJS** application for local Start-Up
- It was a coupon/discount recommender system who deliver coupons and discounts directly to user through Google Cloud Messaging and Apple Push Notification Service improving the Customer - User relationship.

Freelance (Remote) Liliane Fonds Ong (2013-2, 2014-1)

Software Engineer

- Migrate a **Ruby on Rails 2** application to **Ruby on Rails 3**
- Developed new features and improve performance.

Universidad EAFIT (Medellín Colombia) / ARTICA (Applied ICT Regional Alliance) (2012-1, 2012-2)

Research assistant in IPTV

- Java Android Software Developer
- Interactive Android TV controls based on Accelerometers, Gestures, Buttons, Voice, and Multimedia (the last one was developed by testing the best capabilities of the other ones based on their usability) **Java Android**

OPEN SOURCE AND COMMUNITY CONTRIBUTIONS

All projects and current work can be found at my GitHub profile: <https://github.com/sescobb27>

- Speaker at **CodeBeam SF 2020** <https://codesync.global/speaker/simon-escobar-benitez/>
- Speaker at **ElixirConf Latin America 2019** <https://www.elixirconf.la/conference-simon-escobar>
- Ex-Organizer of **RubyConf Colombia**
- Ex-Organizer of **RailsGirls Medellín**
- Organizer of **Ruby Medellín** Meet-Up

SKILLS

- Proficient designing systems via RFCs.
- Proficient in Elixir, Phoenix, Ruby, Ruby on Rails, JavaScript, NodeJS, Test Driven Development.
- Proficient in GRPC.
- Proficient in Protobuf.
- Proficient designing and building APIs.
- Familiar with Postgresql.
- Familiar with GNU/Linux.
- Familiar with GIT.
- Familiar with Domain Driven Design.
- Familiar with Golang.
- Familiar with GraphQL.

LANGUAGES

- Spanish - Native Language
- English - Proficient

EXTRAS

- CodeBeam SF talk **Docker Images a la carte with Elixir and RabbitMQ**
<https://codesync.global/media/docker-images-a-la-carte-with-elixir-and-rabbitmq-cbf20/>

- RAFT Consensus algorithm talk *Papers We Love Medellín*
<https://github.com/papers-we-love/medellin/pull/4>
- Article on ex_rabbit_pool open source AMQP connection pool. https://www.erlang-solutions.com/blog/ex_rabbit_pool-open-source-amqp-connection-pool.html
- Asynchronous and Parallel behavior with Go *Golang Medellín Meet-Up* talk
<https://github.com/sescobb27/async-go>
- Article on how to build a TCP Chat using ruby. <http://www.sitepoint.com/ruby-tcp-chat/>

PERSONAL REFERENCES

- Juan Pablo Buritica *CTO at Elizabeth & Clarke* and *VP of Engineering at Splice* Twitter @buritica
- Sebastian Arcila Valenzuela *Architecture Director at Barista Ventures* Twitter @sarcilav