

Alexandre Marangoni Costa

Software Engineer

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Occupation

March 2019 – Present Firework, San Mateo - California

- **Staff Software Engineer** from Aug 2022 until now

Lead the Ads team

Lead big refactor to support long-term company strategy:

- Task was considered unfeasible by other 2 engineers
- Did with zero downtime, zero bugs, seamless transition
- No other team was affected and nobody had to adapt
- 80 short backwards compatible pull requests
- 5k+ lines 15k- lines in 5 months
- Finished before deadline to allow company strategy

- **Technical Lead** from May 2021 until now

Review all backend work

Plan and execute refactors to scale up the backend

Hire and train new devs weekly

Mentor engineers on race condition, algorithm optimization, database optimization, advanced DB/Redis features

- **Senior Software Engineer** from Feb 2019 until Aug 2022`

Solve and prevent downtimes

Wrote the first chat backend

Wrote distributed algorithms to allow up/down scale the cache system

Wrote stream pipelines to optimize RAM memory

Maintain the cache system, using Redis Cluster

Deleted more code than wrote

Optimized slow dashboards from 1 minute to few milliseconds

Detect and fix bottlenecks

Improve dev productivity with faster compilation from minutes to seconds

Improve dev productivity with 4x faster tests

February 2017 – March 2019 **Machine Learning Researcher and Backend Developer**, D2S, Rio de Janeiro

Company founded with former teachers to build projects using Ruby on Rails as backend, Python as a machine learning interface and Vue.js on the frontend. Alexandre was also responsible for database and server infrastructure.

December 2016 – July 2017 Teacher, Le Wagon, Rio de Janeiro

Le Wagon has been ranked as the best coding school in the world for the last 3 years. Alexandre was teacher at 2 bootcamps, where he understood and practiced different programming aspects, such as: databases, HTML/CSS, javascript and backend programming with Ruby on Rails. There is a photo of him teaching, on [Slack's blog](#).

June 2015 – September 2016 Chief of Technology Office, Responde Aí, Rio de Janeiro

The challenge was growth and healthy scaling the product through Brazil: lead generation, segmentation, marketing strategy, marketing partnerships, online advertising and a lot of metrics. Besides leading a team, some of the technical challenges were: infrastructure scaling, heavy code refactoring and SQL query optimization.

January 2015 – June 2016 Full Stack Web Developer, LUZ Planilhas, Rio de Janeiro

Hired as a full stack web developer in a team of 3 devs, we developed an ecommerce platform, from the ground up. It was focused on digital goods (such as files), and the main concerns were: page speed, uptime, selling conversion, mail marketing integrations, analytics (metrics) generation.

November 2013 – January 2015 Full Stack Engineer, GoBooks, Rio de Janeiro

Alexandre got invited to this project when it was a shyly coded MVP. It was a poorly designed e-commerce, so he decided to rebuilt everything from scratch. His everyday work consisted of the classic web workflow: optimizing queries/requests, Test-Driven-Development, Amazon Web Services, bug tracking, HTML/CSS/JS frontend, etc. Also, he developed solutions for inventory control, product tracking, barcode handlers, payment methods.

July 2012 – July 2013 Internship and Junior Developer, Outra Coisa (former Polo Marte), Rio de Janeiro

Over the internship, he worked on the development of postzero.com, in which he had an every-day contact with technologies such as Git, Amazon Web Services, CoffeeScript and learned about leadership, project management and tracking, agile methodologies, and web services (API management).

Education

2008–2013 Pontifical Catholic University of Rio de Janeiro, Brazil -
Bachelor's degree on Computer Engineering - Avg. grade: 8.2 / 10 - Teacher assistant on Calculus and Programming classes - CNPq researcher on Computer Graphics, supported by the Math Dept.

2011–2012 Institut supérieur de mécanique de Paris, France -
Exchange student - Industrial Engineering

2017–2019 Pontifical Catholic University of Rio de Janeiro, Brazil -
Master's degree on optimization and automated reasoning - Avg. grade: 9.5 / 10 - Obtained the scholarship “Mestrado Nota 10”, by FAPERJ, which was given to the 2 best students of the department - Researched the application of data science in agribusiness and weather data - Researched the application of machine learning to develop an automated poker player