Nicolas Gaitan Escobar, Software Engineer

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LINKS

LinkedIn, Github, Gitlab

EDUCATION

Aug 2016 — Sep 2021

Systems and Computing Engineering, Universidad de Los Andes

Colombia

Bachelor in Science, GPA: 4/5

Relevant Courses: Algorithms, Data Structures, Databases, Software Architecture, Cloud Computing, Automated Tests, Web Development, Mobile Development, Networks, Distributed Systems and concurrency.

Relevant Coursework: Senecare Backend (Thesis), SaaS for video competitions (Cloud Computing), Software Architecture for Nidoo (Software Architecture), Automated Tests for Habitica (Automated Tests).

EMPLOYMENT HISTORY

Aug 2021 — Mar 2022

Experienced Software Engineer, Phi Technologies

Remote

In a nutshell, I was in charge of the integration team for a medical-related project. For this I:

- Increased resource usage by 50% by designing a micro-service-based architecture using containers to use all the available computing power.
- Boosted data purity by 75% by building MongoDB pipelines to clean new data.
- Designed Elastic Search analyzers to connect different data sources such as medical documents, universities, and medical product manufacturers.
- Improved performance by 80% and response time by 20%, by refactoring an existing recommendation system for doctors planning to research new medical products.
- Trained new team members.

Jan 2021 — Aug 2021

Lead Backend Engineer at Senecare, Universidad de los Andes

Bogotá

Senecare is the approach Universidad de Los Andes took to mitigate the spread of COVID 19 during the pandemic. As part of my thesis, I was in charge of the second iteration of the backend. This meant that I:

- Improved the performance of existing services by 70% by fixing and finding all the existing bugs.
- Found security breaches and fixed them.
- Engineered and implemented a new microservice related to the vaccination process.

Back then the backend was accessed by more than 18.000 active users.

Jan 2021 — Aug 2021

Research Assistant at Cupitaller, Universidad de los Andes

Bogotá

Cupitaller is a support group for students having problems with programming. It is also a research group where I:

- Designed the architecture for a dashboard for professors to receive metrics related to their students.
- Implemented a dashboard for professors to receive metrics related to their students.
- Built a report generator for teachers in charge of the basic programming course using Python.
- Created beginner coding problems for new students.
- Organized and assisted 30+ student tutors.

Mar 2020 — Jan 2021

Software Engineer Intern, Phi Technologies

Prague, Czech Republic

I was in charge of crawling data and connecting it with existing services. to accomplish this I:

- Increased the amount of data by 500.000 by crawling and cleaning medical documents using Scrappy, Puppeteer, and Elastic Search.
- Extracted key medical concepts from the crawled documents using an API developed by another team.
- Engineered and implemented a search page for medical documents.

OTHER PROJECTS

Nov 2019

ZooHackathon

Bogotá, Colombia

The purpose of the ZooHackathon (sponsored by AWS) was to propose technology solutions for illegal timber in Colombia. For the solution, my team and I:

- Designed a Blockchain-based solution to track every single wood piece.
- Implemented a Blockchain in AWS that simulates wood logs (including their transformations).
- Coded an SMS service to help lumberjacks report wood logs in low data areas.
- Built a mobile app for the police to verify wood logs with the Blockchain using Flutter. If the log is not in the blockchain, an anomaly is reported and the police can confiscate the wood.
- Created a visualization tool for the authorities to see a heat map of anomalies.

This proposal gave us the third place in the competition.

Nov 2019 — Nov 2019

Open Sourcing for Habitica

Remote

My Automated Tests coursework final project consisted of building a test suite for Habitica. For this I:

- Designed the architecture for the test suite using the GCP cloud.
- Wrote automated tests for 20 important use cases.
- Implemented UI regression tests.
- Tested the suite by creating anonymous mutants and identifying them.
- Measured performance using monkey testing.

Along with this, one of my tasks for my Mobile Development coursework consisted on identifying performance issues on Mobile Apps. To solve this I:

- Identified two major memory bloats.
- Improved the performance of 3 use cases by 40% by using multi-threading in iOS.
- Reported bugs to the app maintainers with the proposed solutions.

SKILLS

Technical

Languages: JavaScript, TypeScript, Python, Java, SQL.

Databases: PostgreSQL, MariaDB, MongoDB, DynamoDB, Elastic Search.

Technologies: Unix, MacOS, NodeJS, Pip, React, Git, Docker, TypeORM, Rest API.

Cloud: AWS, GCP, Azure Cloud

Languages

Spanish (native), English (C2), Italian (B1), German (B1).