

Daniel Fonseca

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Profile

Staff Software Engineer with 15+ years building products that connect millions of users globally. Currently at **DoorDash** leading Trust & Safety initiatives, previously built systems at scale for Brazilian unicorns (**QuintoAndar**, **Neon Bank**) and Silicon Valley startups (**GitLab**, **ClickUp**).

Core Expertise:

- Large-scale distributed systems serving millions of users
- Backend development (Kotlin, TypeScript, Python, Go)
- Machine Learning applications (NLP, TensorFlow, PyTorch)
- Technical leadership of 20+ engineer teams
- Cross-functional collaboration with product, design, and data teams

Active open-source contributor (NestJS core, Kubeless top-5) and technical mentor. Passionate about creating scalable solutions that push the boundaries of technology.

Primary Stack

[Distributed Systems](#) [Machine Learning](#) [Kotlin](#)

[Python](#) [Typescript](#) [Go](#) [Kubernetes](#) [DevOps](#)

[Infrastructure as Code](#)

Work Experience

📅 11/2024 – PRESENT 📍 UNITED STATES

Staff Software Engineer DoorDash

DoorDash is a leading on-demand logistics platform connecting consumers with local businesses. As a Staff Software Engineer, I played a pivotal role in establishing and scaling the Brazil engineering office while driving critical technical initiatives in Trust & Safety and Dasher onboarding.

Key Contributions:

- Pioneered the establishment of the Brazil engineering office, being among the first hires and playing a key role in scaling the team to 50+ engineers. Served as the most senior engineer, shaping technical direction and mentoring local talent.

Work Experience

- Led the complete overhaul of Dasher onboarding, transforming the process into a fully asynchronous experience, improving efficiency and scalability while enhancing the user journey.
- Orchestrated the migration of the entire Trust & Safety domain from the U.S. team, which worked on it for over four years, to a significantly smaller Brazilian team, optimizing processes and enhancing system performance.
- Streamlined and improved Trust & Safety infrastructure, implementing more efficient workflows and scalable solutions, significantly boosting fraud prevention and Dasher authentication mechanisms.
- Acted as a key bridge between global engineering teams, ensuring smooth collaboration and alignment on technical strategies and product priorities.

📅 03/2022 – 11/2024 📍 UNITED STATES

Lead Software Architect Trilon

Trilon is the company behind NestJS, providing consulting and solutions to enterprises leveraging NestJS and cutting-edge technologies. As a Lead Software Architect, I helped customers solve complex engineering challenges, working with companies such as GitLab, ClickUp, Plato, and Motion.

Key Contributions:

- Orchestrated the development of a multi-tenant e-commerce platform for a leading industrial parts distributor in the U.S., crafting a unified codebase and backend infrastructure to support multiple e-commerce sites.
- Managed a team of 20 engineers, overseeing technical design and fostering team growth to deliver scalable, maintainable, and forward-looking solutions.
- Pioneered and managed a machine learning project to automate customer purchase request processing, creating a web application and Excel add-in capable of handling up to 100,000 rows of data.
- Successfully migrated Plato, a Silicon Valley startup's legacy codebase, to NestJS, implementing a microservices architecture following in-depth research and analysis.
- Enhanced ClickUp's legacy codebase by implementing best practices with Nx and NestJS, and authored Architecture Decision Records (ADRs) to facilitate technical discussions.

Work Experience

📅 10/2020 – 03/2022 📍 BRAZIL

Chief Technology Officer (CTO) Bud

Bud is a startup focused on product-led growth, leveraging technology to drive engagement and operational efficiency. As CTO, I spearheaded technical strategy, product development, and team scaling, directly contributing to the company's growth and funding success.

Key Contributions:

- Spearheaded and coached a high-performing product team comprised of developers, designers, and product managers, instilling a product-centric mindset that propelled startup growth and success.
- Played a pivotal role in securing pre-seed and seed funding, facilitating platform scaling and customer acquisition efforts.
- Supervised the development of intricate features such as notifications, real-time analytics, social networking, and multi-tenancy database management, elevating the platform's user experience.
- Conceptualized and launched the company's OKR platform MVP within a month, utilizing NextJS, NestJS, TypeScript, and React, actively contributing to strategic discussions regarding product direction.
- Expanded the product team and guided the MVP's development, implementing crucial features over two quarters that resulted in heightened customer adoption and company expansion.

📅 04/2019 – 10/2020 📍 BRAZIL

Senior Software Engineer QuintoAndar

QuintoAndar is a leading Brazilian proptech company revolutionizing the real estate market with technology-driven solutions. As a key technical leader, I contributed to infrastructure modernization, backend development, and strategic initiatives to enhance consumer acquisition and engagement.

Key Contributions:

- Spearheaded the design and implementation of an on-premises Kubernetes-based serverless infrastructure, enhancing operability and developer experience company-wide.
- Led the automation of serverless function deployments on Kubernetes using Kubeless, achieving recognition as a top contributor to the open-source project.
- Managed and optimized company infrastructure, implemented monitoring solutions with Prometheus and Grafana, and automated real-time alerts via Statuspage for improved decision-making processes.
- Functioned as the senior backend engineer in the Top of Funnel squad, focusing on consumer

Work Experience

acquisition by developing microservices in TypeScript and Python to optimize user experience from website visits to property bookings.

- Enhanced customer engagement by refactoring the notification system to handle up to one million daily alerts and implementing smart notification features.
- Developed a machine learning-powered smart pricing feature enabling dynamic property price adjustments based on market demand.
- Mentored junior team members, established company-wide architecture decision patterns, and secured victory in the company's first hackathon.

Education

📅 01/2021 – PRESENT 📍 CAMPINAS, BRAZIL

Computer Science | Master's UNICAMP

- Conducted research during master's program at UNICAMP, focusing on memory usage for seismic attribute operators before execution.
- Developed TraceQ, a memory profiler that dynamically instruments Python codebases to generate accurate memory profiles.
- Integrated TraceQ with scheduling tools to optimize chunk size for data processing, ensuring efficient work distribution and minimizing memory usage.
- Implemented project in seismic initiative at Petrobras, fully integrated with their automatic feature detection system.
- Enabled new models to determine the best cluster configuration on the fly, optimizing cost and performance without losing training data during profiling.

📅 06/2017 – 07/2024 📍 BOSTON, UNITED STATES

Machine Learning | Expert MIT

- Completed an expert course at MIT focusing on the foundations of machine learning, tailored for big data and text processing.
- Developed a comprehensive understanding of state-of-the-art artificial intelligence techniques and a solid foundation in mathematical logic relevant to machine learning.
- Studied and applied essential concepts, including backpropagation, bag of words, word2vec, and seq2seq using TensorFlow.
- Enhanced skills in machine learning and deep learning, with a focus on processing large datasets and text data.
- Applied gained knowledge and experience to successfully contribute to data science and machine learning projects.

Publications

07/2023

High Performance Computing in Clouds Springer

<https://link.springer.com/book/10.1007/978-3-031-29769-4>

- Authored a comprehensive guide on leveraging cloud computing for High-Performance Computing (HPC) applications, focusing on deployment, design, and optimization.
- Developed best practices for maintaining and optimizing HPC in the cloud, with an emphasis on fault tolerance and resource efficiency.
- Featured case studies from scientific sectors such as bioinformatics and the oil and gas industry to highlight successful HPC cloud migrations.
- Explored the use of cloud services for training deep learning models and provided practical strategies for executing HPC applications.
- Addressed a gap in existing literature, positioning the manuscript as a valuable resource for IT professionals, students, and researchers interested in cloud-based HPC technologies.

Volunteering

📅 01/2022 – PRESENT

Core Contributor NestJS

- Collaborated directly with founders, maintainers, and core contributors of NestJS at Trilon, providing valuable contributions to the microservices packages.
 - Implemented new features and optimizations based on real-world client feedback, enhancing the framework's functionality.
 - Utilized insights from professional experiences to address developer needs and challenges in building scalable server-side applications.
 - Contributed to the evolution of NestJS to benefit the broader developer community, ensuring continued innovation and growth.
 - Actively participated in the open-source community, giving back and driving innovation in everyday tools and technologies.
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