

## Resume

# Tiago de Oliveira Stutz

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## Fullstack/Systems/Staff Engineer (18 years)

- **Languages:** Javascript/HTML/CSS (15y), ReactJS (5y), NextJS (6m), NodeJS (6y), Golang (2y), Python/Jupyter (1y), React Native Android/iOS (2y), Java (6y)
- **Platform:** Linux sysadmin (5y), Docker (5y), Networking/Security (3y)
- **Devops:** Github actions, Gitlab runners, Sonar, Git, Gitflow
- **Data:** Kafka (1y), Sharded MongoDB (3y), Sharded MySQL (4y), InfluxDB (2y), Postgres (3y), S3 (1y), QuestDB (6m), Prisma GraphQL, ArangoDB
- **Analytics and DataViz:** Map-Reduce in Python and NodeJS, ChartJS, Grafana, Apex Charts
- **Cloud:** VMWare (2y), AWS (1y), Azure (1y), Digital Ocean (2y), cheap VPSs (5y), Prometheus
- **UX and Frontend:** A/B Tests, "Laws of UX" guidance, Typography constraints, Bootstrap (3y), Tailwind (6m),
- 4 years as **SRE**. 7 years as **Fullstack**. 4 years as **staff engineer**. 3 years **managing staff engineers**.
- 6 years as **Systems Architect** at an enterprise (90k+ employees) co-founded Research Lab

## Professional Experience

- **Banco do Brasil S.A** (2007-present): Conceived, designed and implemented dozens of different public facing systems, internal web and mobile applications, security models and both business and technological experimentations. Currently manages the recently created Enterprise Open Source initiative, collaborates with the Research Lab with hands on and code review on technology POCs.
- **Stutz Solutions** (2011-present): Co-Founder, Business Executive and Fullstack Engineer. Custom software development for different business and markets, from legal, to advertising agencies, to education and healthcare. (Last project: <https://app.earlydenver.com.br/>)
- **E-didático** (2017-present): Co-founder, UX Designer, System Architect and Fullstack Developer. Design and implementation of an online exams platform currently used by thousands of students from an educational group in Brazil that heavily relies on friendly UX and realtime analytics.
- **Lexana Inteligência Jurídica** (2017-2020): Co-founder, UX Designer and Staff Engineer. Development of a digital Law visualization and handling tool, that was later bought by the Brazilian Supreme Court as its Constitution Platform. (<https://constituicao.stf.jus.br/>)

## Education

- Universidade Estadual de Londrina (UEL), Brasília, Brazil - Computer Science (2003-2006)
- ~15k hours of self education on UX, Business, Entrepreneurship, Architecture and Systems Engineering over the years. Among **Top 1% global** on CodersRank (<https://profile.codersrank.io/user/tiagostutz/>)

## Selected projects

- **Vade Mecum Lexana:** Law visualization and handling tool. With this tool, users are able to search within the law fragments and annotations, navigate in a tree interaction fashion, toggle favorite fragments, create groups to share notes and favorites. I designed both the system architecture, which is heavily based on micro services, and the cloud architecture. I implemented 80% of the Frontend, using ReactJS, Custom CSS schema with Grid System and using two custom made frameworks (<http://github.com/tiagostutz/rhelena> and <https://github.com/tiagostutz/manuh>) to handle heavily UI update. Implemented 60% of the search engine in Go using Bleve, 50% of the backend that uses ArangoDB as the DB and VerneMQ as the MQTT broker used to update the UI using web sockets. Run on a Docker Swarm cluster.
- **Sandman:** Container as a Service Platform based on VMWare, Docker Swarm and Gitlab. I helped design the architecture and implement the second release of the network/security architecture for Internet facing services, HTTPS balancers, Docker Registry/Cache, and Prometheus/Grafana monitoring services. After 5 years of operations we got 1000 internal developer accounts on our self service platform and about 600 containers running simultaneously with just 2 guys maintaining the platform.
- **Agriculture Crop Analysis:** Jupyter Notebook with data from crop field states throughout a date range, discriminating when something was planted, what max biomass it reached, when it started to decline and when it was cropped. I created a utility that generates an HTML compiled analytics report for the Bank Field Inspectors with calculated NDVI, smart pictures and other indexes (such as pluviometry) using satellite images and other external data APIs.
- **Edidatico:** Development of an online exams platform with realtime user behavior telemetry using MQTT and analytics over the questions and answers database, tailor made for the Brazilian educational market. I implemented about 80% of the Frontend in ReactJS, 80% of the API in NodeJS/Go with PostgreSQL and MongoDB, 50% of the Docker Swarm Cloud infrastructure. Configured and heavily tested the sharded MongoDB cluster and implemented a load test with 3 thousand simultaneous browsers using Puppeteer.
- **Early Denver:** Web application tailor made for autism clinics that works with the Early Start Denver Model with it children and parents. I implemented 90% of the Frontend using ReactJS/ React Hooks, Bootstrap 3 and Apex Charts. The backend uses NodeJS with GraphQL built with [prisma.io](https://prisma.io) on top of MySQL and Casbin for the JWT authentication based.