April 2022–Present

Júlio César Batista

Work Experience

Senior Software Engineer

Terrastruct

San Francisco, US (Remote)

- Optimized the graph layout engine memory usage and speed by 4x using algorithms and data structures.
- Led the development of a two-way (commit, push,pull) integration between D2 Studio and GitHub.
- Fixed an issue with concurrent updates when multiple users were working on the same diagram.
- Researched and implemented the <u>engine for hierarchical</u> and <u>sequence diagrams</u>.
- Contributed to <u>Terrastruct's D2</u> (13k+ stars on GitHub) open source project, notably <u>PowerPoint</u> and <u>GIF</u> exports.
- Built an OAuth2 and OpenID Connect (OIDC) compliant Single Sign-On (SSO) flow for self-hosted customers.
- Improved the team productivity with tools to simplify debugging and profiling the layout engine.
- Implemented a suite of end-to-end (e2e) and performance tests using k6js.
- Employee #6.
- Tech stack: Go, Typescript, React.js, PostgreSQL, Redis, AWS, k6js.

Senior Backend Engineer Platform (Scrapy Cloud) team

Zyte (formerly Scrapinghub)

Cork, Ireland (Remote)

- Built a scalable job scheduler to improve resources usage and job scheduling throughput for a big customer.
- Organized processes and "on call" rotation to reduce interruptions, allowing the team to focus on sprint tasks.
- Operated highly available, distributed services and web APIs on top of a cloud cluster with 30+ servers handling 200k+ requests per day, thousands of web crawling jobs scheduled per hour and millions of records scraped per day.
- Tech stack: Python, Django, Django Rest Framework, Flask, MySQL, Apache Mesos, Celery, RabbitMQ, Apache Kafka, Faust, Grafana, Prometheus, Docker.

Software Engineer

Zyte (formerly Scrapinghub)

Cork, Ireland (Remote)

- Designed and built a generic crawler to download files and articles from thousands of sources. <u>Related blog post</u>.
- Operated a pipeline (ETL) with 50+ crawlers delivering high quality datasets/week for a FAANG.
- Operated a large scale, distributed pipeline with 10+ crawlers delivering TBs/month of product and reviews data.
- Built a crawler to monitor the web for business-to-business (B2B) products being sold in consumer (B2C) platforms.
- Built a "search engine" pipeline to monitor pages for a given set of keywords and its variations on a daily basis.
- Mentored 3 students during Google Summer of Code (GSoC) in 2019 and 2020.
- <u>Contributed to scrapy</u> (47k+ stars on GitHub) and other open source tools from Zyte.
- Tech stack: Python, Scrapy, AWS, ETL, Docker, Hadoop.

Software Engineer

Myrp - Cloud ERP and Point of Sale (POS) Blumenau, Brazil

- Built a standalone POS software bringing thousands of new customers.
- Built a web API and integration SDK for Myrp to synchronize data with any POS software.
- Built a reliable state machine to ensure invoices were properly integrated with a third-party service.

Inventti

• Tech stack: C# .NET, ASP.NET, SQL Server, RabbitMQ, PostgreSQL.

Software Engineer

Ellevo Blumenau, Brazil

Tech stack: Javascript, jQuery, SQL Server.

2015–2016 / 2017–2018

2012-2015

2021-2022

2018-2021

Education and Certifications

- M.Sc. Computer Science, Universidade Federal do Paraná (UFPR), Brazil.
- B.Sc. Computer Science, Universidade Regional de Blumenau (FURB), Brazil.

Other Skills

- Technologies: Git, Event Streaming, Batch Processing, FastAPI, OpenCV, Tensorflow, PyTorch.
- Other: Agile, Continuous Integration (CI), Continuous Deployment (CD), Unit test, Integration tests, Performance tests (k6), test driven development (TDD), SOLID, Design Patterns.

Extracurricular

Meetup Host

Hackerspace/GruPy Blumenau Blumenau, Brazil

2018–Present

2019-2021

- Hosted 50+ tech meetups in Blumenau and on YouTube.
- Organized FLISoL 2023 with 9 talks, 2 workshops and 50+ attendees.
- Organized Blumenau Dev Day 2019 with talks from 10 local tech communities and 100+ attendees.

Adjunct Professor

Universidade de Blumenau (FURB)

Blumenau, Brazil

- Python and R for data science: taught the basics of Python and R for data science, including core packages such as pandas, matplotlib, scikit-learn, scikit-image, and numpy.
- Information Retrieval: taught an introduction to information retrieval, including web crawlers, reversed indices, boolean queries and spell checking.
- Data visualization: taught the core concepts about data visualization and types of plots using matplotlib.

2016–2018 2011–2015