

# Rodrigo Bressan

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## SKILLS

Languages	Go, Python, Java, TypeScript, SQL (MySQL, Postgres), NoSQL (Mongo, DynamoDB, Redis), React, Django
Tools	AWS, Terraform, Docker, Kubernetes, Git, Argo CI/CD
Methodologies	Agile, Scrum, Testing (TDD, Unit Tests, Cypress), Clean Code
Natural Languages	Portuguese (Native), English (Fluent), Italian (Fluent), Spanish (Intermediate)

## WORK EXPERIENCE

**Founder / Software Engineer** **Ponteltalia - Remote** **Oct 2022 - Current**

- Authored a **PaaS** to help users find genealogical records with over 3 thousand active users using **Go, Python** and **React**
- Designed an ETL pipeline using a **serverless approach** with **AWS Lambda and S3**, handling a stream of over 70 GB of data
- Setup and maintained a **monitoring and alerting** system using **AWS CloudWatch, PagerDuty** and **Sentry**, greatly improving incident response time and overall user experience with an **average application uptime of 99.9%**
- Improved API responses by 40% through the adoption of **caching with Redis** along with **SQL indexes optimization**
- Developed a handwritten text recognition system (OCR) using **Python** along with **AWS Extract** with an accuracy of 80%

**Full Stack Engineer** **Empatica - Italy (Remote)** **Jul 2020 - Oct 2022**

- Built **REST** and **gRPC** APIs with **Go** for customers with mission-critical needs (e.g. NASA, UK Army, US Health and Human Services), deployed on **AWS** and provisioned through **Terraform**, with **over 99.99% of uptime**
- Designed and implemented a **serverless stream processing data lake** with **Python** using a mix of **Lambdas, S3** and **Firehose** replacing an existing solution (**PostgreSQL**) with a more scalable one and reducing costs by around 40%
- Took ownership of several new features and products by coordinating efforts between PMs, developers and data engineers
- Participated on the **hiring** and **onboarding** processes for new engineers, along with **mentoring** of several junior engineers

**Software Engineer** **Bill & Melinda Gates Foundation - Brazil** **Jul 2018 - Jun 2020**

- **Mentored** software and data engineers on software engineering topics (**clean code, testability, CI/CD, containerization**)
- Setup infrastructure for data engineers, allowing them to quickly test, evaluate and deploy Machine Learning models
- Led the adoption of **multithreading/parallelism** techniques, **improving by 70% the performance of existing ETL pipelines**
- Led the migration of a monolith to **microservices based one**, reducing deployment times by 1/3 of time

**Software Developer** **Cleevio - Czech Republic** **May 2016 - Dec 2017**

- Led the migration of Android apps from **Java** to **Kotlin**, allowing code re-usage across Android and iOS platforms
- Introduced **Test Driven Development** methodology, resulting in quicker iteration cycles between developers and QA
- Defined a set of **architectural models** to be adopted, resulting in more modular and testable components

**Software Developer** **Movile - Brazil** **Jan 2014 - Jul 2015**

- Developed native Android applications, integrating with REST APIs, along with CI/CD to app stores
- Developed an integration between a CMS and 3rd party providers, automating an existing laborious and prone-to-error task

## EDUCATION

**Computer Science**, Federal Institute of Technology of São Paulo (2015 - 2018)

- **Award** for best work on Brazilian Institute for Space Research on the topic of *"Identifying Security Management State of Art using Natural Language Processing"*

- Minor on **Data Science and Artificial Intelligence**, with academic publications on **biometrics and computer vision** areas

**Informatics**, UNICAMP Technical College (2011 - 2014)

## PERSONAL/OPEN SOURCE PROJECTS (More available on personal GitHub)

### Ponteltalia ([Live Demo](#))

Developed a full-stack PaaS to allow users to find and locate Italian public records using several Italian public databases along with 3rd party genealogical related datasets (e.g. FamilySearch, GeneaNet)

*Tech stack: Go, Python, React, MySQL, AWS*

### Face2Data ([Source code](#)) - ★ 109 Stars

Extract meaningful information from a person face in less than a second. Powered by Keras and Flask.

*Tech stack: Python (Keras framework), React, Keras, TensorFlow, Heroku*

### Entity Embeddings ([Source code](#)) - ★ 70 Stars

Discover relevant information about categorical data with entity embeddings using Deep Neural Networks

*Tech stack: Python (Keras framework), React, Keras, TensorFlow*

### TMDB Clean Architecture Blueprint ([Source code](#)) - ★ 65 Stars

Showcase of clean architecture concepts along with Continuous Integration and Development for modular Android applications. Includes test suits (functional and unit tests) along with code coverage.

*Tech stack: Java, Kotlin, Android SDK, SQLite, Travis CI/CD*

### DigiPathos ([Source code](#)) - ★ 39 Stars

Brazilian Agricultural Research Corporation (EMBRAPA) fully annotated dataset for plant diseases. Plug and play installation over PiP with an easy-to-use CLI tool

*Tech stack: Python*

### PADify ([Source code](#)) - ★ 17 Stars

Built a Python framework to perform PAD (Presentation Attack Detection) on Facial Recognition systems through intrinsic properties (e.g. depth, illumination) along with Convolutional Neural Networks

*Tech stack: Python, TensorFlow, Keras*

## PERSONAL INTERESTS & HOBBIES

- **Academic Research:** biometrics, computer vision, public healthcare, diseases prevention
- **Software Craftsmanship:** clean code, system design, software architecture
- **Language Learning**
- **Outdoor Activities:** climbing, windsurfing, surfing, road cycling
- **Van/Campers:** solar-powered grids, car mechanics, electrical systems
- **Volunteering:** volunteer work at *Rifugio Garibaldi* (dog shelter in Sicily)