

# Flávio Sousa (Contractor)

Full-stack WebDev • Clojure • Privacy • Open Data

London, Lisbon, Remote

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Full-stack developer proficient in Clojure. Mostly, I'm a technologist who enjoys the process of building something with a real-world use case. I worked for startups, big clients and freelanced. Recently, I've been exploring Open Data and "GDPR friendly" solutions for clients, through my LTD, Codecadre. Currently looking for contracting or client work.

## Toolbox

Clojure/ClojureScript • Javascript/Node.js • AWS • Kafka • Datomic • SQL • Docker • Nginx/Lua/OpenResty • C/Cuda (GPUs)

## Education

Msc. in Mechanical Engineering. Technical university of Lisbon, 2010. Final grade: A

## Open Source/Open data initiatives

<https://github.com/codecadre>

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## PROFESSIONAL EXPERIENCE

### **Codecadre • Director • March 2022 – Present**

<https://passaprimeira.xyz> - Free map visualization of driving school pass rates for Portugal, based on government data. The entire project was done using privacy-friendly tools and avoiding GDPR cookie consent for an optimal user experience.

Clojure and ClojureScript • Babaska • Open Data

### **Career break • August 2021 – March 2022**

Travelled around Italy. Attended courses on data privacy and completed online courses on [neuroscience](#), [CS fundamentals](#) and [philosophy of mind](#). Attended a machine-learning conference and different meetups in Lisbon to expand my network and interests.

### **Origin Rose • Full-Stack web developer • US (remote through Codecadre) • August 2019 – August 2021**

I worked for a product now called [mxv.ai](#) – an IOT remote monitoring solution for the energy industry. The web stack consists of a monolith app made with Clojure and Clojure Script. My role was a mixture of web-development and data-science engineering. I helped build and maintain the ingestion pipeline that feeds data to the data science team, and a Reagent frontend that displays metrics to the customer.

Clojure and ClojureScript • Reagent • Postgres • Timescale

## **Youview • Cloud Services Engineer • London • October 2018 – August 2019**

Youview is the set-top box provider for BT and Talk Talk. All the software running in the box and the cloud services is made in-house. Currently, it serves requests for 2.6 million boxes and apps. I worked on the team responsible for maintaining and writing new features for a set of microservices written in node.js that deals with authenticating requests. I helped initiate the consolidation efforts from a set of microservices, to a more manageable mono repo.

Node.js • Clojure • Ruby • AWS

## **Funding Circle • Clojure Engineer • London • May 2017 – September 2018**

Part of the in-house software development team that migrated a legacy Ruby platform to a modern Clojure and Kafka stack. Worked in small cross-functional teams, and Engineers were also responsible for monitoring and reconciling both platforms during the migration.

Clojure • Kafka • Postgres • Docker • Ruby

## **Style.com • Software Engineer • London • April 2015 – May 2017**

Worked with a team of 30+ engineers and various contract partners developing a green field E-commerce marketplace for Condé Naste, that aggregated data feeds from several brands with AI curation. Contributed with code and expertise to: Frontend/Backend, Integration with E-commerce engine (Hybris), Payment/Fraud detection providers, Rest API, and Analytics.

Clojure/ClojureScript • Docker • Datomic • Nginx/Lua/OpenResty • REST API

## **Muzzley • Full-Stack Developer • Lisbon • August 2014 - January 2015**

Muzzley was a mobile app that integrated several IOT devices in an easy-to-use UI. My role consisted in development and maintenance of core features in the backend infrastructure, using mainly node.js. Also worked on some integrations with cloud services such as weather stations.

Node.js • MongoDB • Redis • Internet of Things (IOT)

## **Freelancing • Lisbon • March 2014 August 2014**

Full-stack web developer for several clients. Responsible for all stages of the projects: gathering requirements presenting quotes, development, deployment and infrastructure. Main projects:

- Developed an e-store currently live that sells [women focused fashion](#), with an innovative branding.
- Build a free voucher service that integrates with Facebook and processes payments from advertisers with PayPal.

Ruby on Rails • Shopify • Javascript • Postgres • Heroku • Facebook Graph API • PayPal • E-Commerce

## **CrowdProcess • Application Developer • Lisbon • March 2013 – March 2014**

Third employee of an early-stage startup. Research and Development of applications for a distributed computing platform. Provided clients with support and documentation. Worked with experts from several scientific fields: computer vision, neuroscience, bioinformatics, genetic algorithms and forest fire prediction. Speaker in conferences and tech meetups. [Developed a forest fire prediction software, based on original research.](#)

Javascript • node.js • Postgres • C/C++ • Python • AWS

## **Technical University of Lisbon • Research Assistant • Lisbon • January 2010 – November 2012**

Ported a widely used [forest fire library](#) to GPU, with speed-ups of 200x. Co-authored 2 papers with 24 citations as of 2022. CFD analyst for a European consortium of companies and universities.

C • CUDA • Java • StarCCM+

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### WHITE PAPERS

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- Simulation of surface fire fronts using *firelib* and GPUs, 2011. ([Link](#))
- Faster than real time stochastic fire spread simulations, 2011. ([Link](#))
- Numerical Investigations on the Inter-Career-Gap Flow for a Generic High-Speed Train, 2011. ([Link](#))

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### AWARDS

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- Second place in the 2011 Msc. Category of the Fraunhofer Challenge. The contest is an academic competition that awards research with practical utility. My project was a mobile app that enabled fire-fighters to turn smartphones into fire simulators, by feeding data to models running in remote servers.
- ISCTE-IUL MIT Venture Competition (2011) – Semi-finalist. Contributed with fluid flow analysis of a high-altitude, floating wind turbine. The project was one of the 20 semi finalists in a startup pitch competition for a prize up to 1 million Euros.