











## João Pinheiro

Software • Systems • Curiosity

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### Interests




Performance optimization,  
Databases, Distributed Systems,  
Reliability

### Projects

[gameboy emulator](#), [sudoku](#), [abra](#),  
[LED Matrix](#), [aoc](#), [playground](#)

## Experience






 Software Engineer  
 [Amplemarket](#)  
 Mar '23 - present

**Tech:** Ruby on Rails, Sidekiq, TypeScript, React; PostgreSQL (& TimescaleDB), Redis, Elasticsearch, Kafka, k8s, GCloud

Series A B2B SaaS startup in Sales. I was part of the initial analytics pipeline effort, using TimescaleDB (ELT), dbt and cube.js. [Overhauled Lead Lists](#). Setup SMTP verification servers. Reverse engineered JavaScript code. Wrote a service called 150 times/s at peak. [Three blog posts](#). Lots of bug investigations and fixes. Many query plans.






 Software Engineer  
 [Celfocus - Unified Communications - One Net](#)  
 Aug. '19 - Feb '23

**Tech:** Java (JBoss, Spring, Hibernate), React, PostgreSQL, ActiveMQ; Docker, Bash, Gitlab CI (K8s on GCloud), Helm, Terraform

[One Net](#) is Celfocus's enterprise voice solution with 5 international deployments. The Call Handling Server (CHS) is a 190k SLOC C++ backend with an in-memory DB (no ORM). It speaks telco protocols (SS7 and SIP) and so has strict SLAs. Its database is provisioned via a web app written in React and Java. I did both CHS and backend development (rarely frontend): new features, refactorings, failover in production and new architecture needs.






 Summer Intern  
 [Caixa Mágica - Portuguese Citizen Card](#)  
 Jun. '19 - Jul. '19

Open Source development in C, C++, Qt Quick/QML.




## Education



 Student  
 Instituto Superior Técnico (IST)  
 Sep. '15 - Jun. '19




Electrical and Computer Engineering.



 Temp Member  
 [FST Lisboa](#)  
 Sep. '17 - Jan. '18

Student race car team. I programmed PIC  $\mu$ Cs and reduced the dev loop to one keypress. Worked on a GUI (C++/Qt) & ported it to windows. I loved the passion and dedication of the team.



 Member  
 [HackerSchool](#)  
 May '16 - Sep. '17

Student society that promotes the Hacker spirit. I codeveloped a [pair of GUI apps in C++/Qt](#) and an [LED Matrix](#) in Python and Arduino. Organized events at IST: [a workshop for younger students](#), [hackathons](#) and [CTFs](#).