## Filipe Augusto Lima de Souza

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## **Senior Software Engineer**

Senior Software Engineer with 15+ years of experience in building and maintaining large-scale **distributed systems**. Proven ability to lead teams, migrate legacy systems to cloud-native architectures, and solve complex problems in cloud environments. Expertise in Go, .**Kubernetes**, and building resilient, scalable software that solves real world problems.

### **Skills**

- Programming Languages: Go | C# | C | JavaScript | TypeScript | Java
- Cloud Computing: Google Cloud Platform | Amazon Web Services | Microsoft Azure
- Other: Kubernetes | Distributed Systems | Cloud Native | Microservices | DDD | TDD | SOLID | Terraform | SQL | Git

### **Work Experience**

# CAST AI, Brussels, Belgium | Senior Software Engineer | 04/2022 - Present

- Led the design and implementation of cloud-native applications and distributed systems for Managed Kubernetes Solutions on Microsoft Azure, Google Cloud Platform, and Amazon Web Services.
- R&D for container live migrations, including the development of a container runtime and orchestration controllers for **Kubernetes**; innovation that got contracts of over \$600k and has potential for another \$2M.
- Reverse-engineered **Kubernetes** internals (CSI, CNI, CRI) to extend its capabilities and wired to a complex SaaS autoscaler **distributed system** also deployed on **Kubernetes**.
- Implemented a multi-cloud billing system with AWS and GCP Marketplaces, supporting over \$20M ARR.

### Rydoo, Mechelen, Belgium | Tech Lead Manager | 10/2020 - 04/2022

- Led a remote team of developers focused on the core expense domain of a SaaS platform, emphasizing scalability, maintainability, and reliability of its distributed systems.
- Integrated TDD practices into the development workflow, enabling developers to write comprehensive unit tests; it resulted in higher confidence to deploy and lower number of bugs to production.
- Spearheaded the migration from a private cloud to Microsoft Azure, breaking down a monolith into **microservices** using Event Storming and Context Mapping; this change

allowed the company to grow the SaaS product to support 250k concurrent users in both web and mobile platforms.

## Squadra Tecnologia, Belo Horizonte, Brazil | Software Architect | 10/2016 - 01/2018

- Led software development in healthcare, logistics, and transportation domains, mentoring team members on code quality and productivity for microservices and distributed systems.
- Designed and implemented modular architectures and microservices using DDD, CQRS, and TDD/BDD for private companies and the Brazilian government.
- Established CI/CD pipelines, development tools and worked with infrastructure teams to ensure safe and reliable releases.

### MRV, Belo Horizonte, Brazil | Software Architect | 07/2014 - 10/2016

- Designed and implemented applications integrated with SAP and Microsoft CRM.
- Led the development of a large-scale mobile application with thousands of users; the project modernized the business and allowed tracking warrant and maintenance of over 50k apartment units in the whole country.
- Researched and migrated systems to Microsoft Azure, integrating services with messaging patterns to support the growth of the technology products in the organization.

## **Last Projects**

### **Container Live Migration**

- Implemented a container-runtime for Kubernetes to allow migration of containers between nodes with zero downtime.
- Reverse-engineered container-runtime internals and Cloud Providers controllers and drivers to allow network migration and persistent storage disks migration between nodes.

#### **Snapshots V2**

- Designed and implemented a specialized file format to be used internally in CAST AI to store cluster information.
- The project was the winner of hackathon in 2025 and will save \$500k/year on cloud storage and computing.

### **Education**

Universidade FUMEC, Computer Science (2012 - 2015)

**UFMG - Universidade Federal de Minas Gerais**, Bachelor's degree, Computer Mathematics (2008 - 2010)