

TiagoKatcipsis

Software Engineer

Contact

Berlin, Germany
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GitHub
LinkedIn
Blog

Education

Bachelor of Computer
Science, UFSC, Brazil.

Languages

English, Portuguese.

Skills

Software architecture
and design.
Critical thinking and
problem
decomposition.
Clear communication,
written and spoken.

Programming Languages

Go, Python, C, C++,
Lua, Bash, Javascript.

Protocols

HTTP, gRPC, SIP, RTP,
RTMP, AMQP.

Automation and Infrastructure

Kubernetes, AWS,
Azure, Google Cloud,
Docker, Terraform,
Ansible, Make, Vagrant,
Docker Compose,
Kustomize, Helm.

Monitoring

Prometheus, Grafana,
StatsD, Sysdig.

Introduction

I'm a curious programmer who likes to explore different ways to design, build and test software always trying to understand as much as I can from the entire environment I'm working in. That led me to do a lot of different things in my 12 years career, from embedded software in C to distributed systems in a variety of languages and protocols. I'm passionate about automation and minimalism when building scalable, reliable and maintainable software.

Experience

2021–2022

Mineiros

Berlin, Germany

Senior Platform Engineer

- Development of Terramate from scratch.
- Development of Terramate Language Server from scratch.
- Specifying features and documenting the project for the general public.
- Implementing parsing and partial evaluation for HCL.
- Implementing code generation and code aware change detection (Git integration).
- Integration tests and Fuzzing in Go.
- Setting up release automation.
- Dealing with community requests and discussions.
- Supporting the tool on all major OS's (Linux, MacOS, Windows).

2021–2021

Flink

Berlin, Germany

Lead Platform Engineer

- Scaling infrastructure from day one to expansion to 3 new countries.
- Setup observability for infrastructure and application (GCP/Sentry).
- Supporting deployment of infrastructure and applications for the whole company (GHA/Kustomize/Terraform).
- Implemented auto scaling for the main e-commerce service using Kubernetes (Django app).
- Infrastructure 100% automated using Terraform, enabled easy expansion to multiple countries.
- Supported migration to micro-services helping teams setup CI/CD automation using GHA.
- Assessed and mitigated performance issues in production involving GraphQL/Django/CloudSQL (PostgreSQL).
- Migrating monitoring to Datadog, exporting logs and metrics from GCP + using APM for traces on applications.

2019–2020	FromAtoB <i>Senior Software Engineer - Search2Book Team</i>	Berlin, Germany
	<ul style="list-style-type: none"> • Implemented new location service from scratch (Go, HTTP, gRPC, Prometheus). • Helped migrate core services from legacy environment to new GKE (Google Kubernetes Engine) cluster. • Built backup routines for critical service (Google Memorystore / Redis). • Solved bugs and improved resiliency of core search services. • Improved development environments making them more consistent. • Integral part of the hiring process doing interviews and pair programming sessions. 	
2017–2019	Neoway <i>Senior Software Engineer - Data Platform Team</i>	Florianópolis, Brazil
	<ul style="list-style-type: none"> • Led the migration of the entire data platform from AWS to Azure. • Developed tools to automate building infrastructure, like k1b. • Created new service to solve audio captchas (Go, Python, SVM). • Prototyped image captcha solver using TensorFlow. • Did 3 different presentations in 2 different conferences about Go and Kubernetes. 	
2015–2017	Neoway <i>Lead Software Engineer - Data Capture Team</i>	Florianópolis, Brazil
	<ul style="list-style-type: none"> • Led development of a new data capture architecture. • Implementation of multiple services for the new architecture (Go). • Implementation of a web scraping framework used to build more than 100 scrapers (Python). • Built automated monitoring system with domain specific metrics (Sysdig, StatsD). • Coached the team on better testing practices and TDD. • Fully automated dev environments and deployment (Docker, Docker Compose). • First team in the company to deploy and use Kubernetes to manage more than 100 deployments. 	
2010–2015	Dígitro <i>Software Engineer</i>	Florianópolis, Brazil
	<ul style="list-style-type: none"> • Developed VoIP phone with color touchscreen from scratch (C on a Blackfin DSP). • Automated development environment for cross compilation (Ansible, Vagrant). • Replaced legacy audio service that used Flash (RTMP) with an HTTP/HTML5 solution (NodeJS,C). • Built new REST service to integrate with company PBX solution (proprietary protocol). • Built a customized audio playback system (Flash, RTMP, GStreamer, C++). • Built a biometric identification service (HTTP, Lua, C, MongoDB). • Coached team on automated testing and TDD. 	

2008–2010 **Dígitro**
Trainee

Florianópolis, Brazil

- Worked on making Windows only VoIP softphone cross platform (C, GStreamer, RTP, SIP).
- Prototype of biometric identification service (Python, GTK, C).
- Prototype of face detection system with processing on the edges (C, OpenCV).

Projects

mdtoc

<https://github.com/madlambda/mdtoc>

A very simple table of contents generator for markdown.

nash

<https://github.com/NeowayLabs/nash>

Nash is a shell language focused on simplicity and having a nicer syntax than traditional shells and support to containers. It also strives to be safer than traditional shells.

klb

<https://github.com/NeowayLabs/klb>

klb is used to automate infrastructure creation on AWS and Azure.

Presentations

2018

Object Orientation in Go

The Developers Conference

Presented the Go object model as something closer to the original idea from Alan Kay then classic object oriented languages like Java and C++. Presentation source can be found here.

2016

Building Resilient Services in Go

GopherCon Brazil

Presented new features on Go, like Contexts, that helps to model timeouts and cancellation properly, which are essential to build a resilient system.

Presentation source can be found here.

2016

Real Life Kubernetes

The Developers Conference

On this presentation we will give a short introduction on Kubernetes and show the experience of learning and using Kubernetes on production. Presentation source can be found here.