

PERSONAL INFORMATION

Fernando Luz

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POSITION Engineering Manager

WORK EXPERIENCE

2022 - Present Engineering Manager

Talkdesk

I've overseen a broad portfolio, including products like **Healthcare Experience Cloud**, **Automated Notifications**, and **Agent Flows**, along with the **QA team**. I've had the privilege of leading and mentoring a team of **10+ Individual Contributors**, ranging from entry-level professionals to team leads.

- Achievements:
- The **Healthcare Experience Cloud** has been a cornerstone of our efforts, involving the seamless integration of healthcare call centers with more efficient and informed patient interactions;
 - The **Automated Notifications** has been instrumental in enhancing communication, focusing on the definition of rules and events to schedule and deliver notifications, ensuring timely and precise interactions with the customers;
 - The **Agent Flows** improved support processes by empowering agents with scripted guidance during customer calls;
 - The **QA team** has established a robust E2E tests framework to rigorously validate product quality, ensuring that our solutions work properly in the Talkdesk environment.

2021 - 2022 Senior Software Engineer

Talkdesk

Integrated a new team from the ground up to create a new solution for banking financial services.

The tech stack in this project uses **Kotlin**, **SpringBoot**, **React**, **Redis**, **Postgres SQL**, **MongoDB**, and **RabbitMQ**.

- Achievements:
- Released the first version of Visual IVR for Financial Services in the Summer release;
 - Created an in-house solution for Visual IVR Frontend;
 - Presented technical sessions to introduce new technologies (Functional Programming, K6).

2018 - 2021 Senior Software Engineer

Capgemini Portugal [ASML Project]

Started the **ASML** project, where I contributed to the new lithography machine generation project. I led the Portugal team to expand unit test implementation with a framework based on **gtest** and implemented the **Variant Pattern** in a robot component. I also was one of the founders of the Meetup internal group in Altran PT.

- Achievements:
- Delivered the first version of the RYUN (Universal Pick and Place Robot) component, with **all features planned** and **100% of code coverage**;
 - Contributed with the RYAU component **migration** to the legacy version and investigated for RYAU autotesters, where I found **65% fake tests** (tests without implementation);
 - Achieved with success the first phase for UTTK to ATTEST migration (**around 400 tests in 10 weeks instead of the initial estimation of 24 weeks**).

2016 - 2018 IT Manager

Technomar Engineering

I led a team in charge of implementing new features for the **Technomar Maritime Simulator** used in training activities. I initiated the certification plan with DNV GL agency and contributed to the core of the hydrodynamic numerical model. Additionally, I fostered best practices in software development, including the use of **Scrum**, **Test-Driven Development**, **Git**, and conducted mentoring sessions to enhance team knowledge.

- Achievements:
- Enhanced communication channel using the phonon framework, with gains in **15% speedup** and improved the code maintainability;
 - Orchestrated the **full delivery** of a new simulation station at the Technomar office, providing a simulator with 360 degrees immersion;
 - Instituted **Gitlab** as a tool to obtain code metrics, and manage the bugs, new features, backlog, and milestone control for the team and the founders.

2008 - 2016 Researcher / HPC Software Engineer

Numerical Offshore Tank

In the TPN laboratory, I developed **High-Performance Computing** applications using **C++/C**, **Python**, **MPI/sockets**, and **bash** in Linux and Windows. I also handled testing, optimization, parallel improvements, and integration with other projects. Additionally, I contributed to the creation of **SMH**, a finalist for the 2016 ANP Prize Award for Technological Innovation.

- Achievements:
- Optimized parallel execution of the numerical solver in the cluster environment saving around **35% in resources** using my Ph.D. research;
 - Achieved improvements in the Numerical Solver, reducing execution time by **10%** through the utilization of **OpenMP**, and implemented **MPI standards** in the Parallel version;
 - Championed the use of *development tests* flow to increase the development quality and built an initial **CI** with (CDash and CTest) to check the repository integrity.

2011 - 2016 Graduate Full Professor

Paulista University

Teaching-related responsibilities such as giving lectures, tutoring, managing homework, laboratory activities, exam preparation, and grading.

EDUCATION AND TRAINING

- 2010 - 2015 **Ph.D. in Computing Engineering**
Title Methodology for the execution of parallel applications based on BSP model with heterogeneous tasks
Polytechnic School, University of São Paulo (USP)
- 2006 - 2010 **M.Sc. in Applied Physics**
Title Implementation of the MILC package in the study of full QCD
Physics Institute of São Carlos, University of São Paulo (USP)
- 2001 - 2006 **B.Sc. in Physics**
Physics Institute of São Carlos, University of São Paulo (USP)

PERSONAL SKILLS

- Technical skills
- Agility
 - Kotlin
 - SpringBoot
 - C++
 - Bash
 - Python
 - Object-oriented design
 - Jira
 - C
- Soft skills
- Team player
 - Problem Solver
 - Ownership
 - Time management
 - Build solutions
 - Lead and deliver complex software systems

ADDITIONAL INFORMATION

VOLUNTEERING

- Jun 2022 - Present **President**
Associação de Pais e Encarregados de Educação da Escola Básica Manuel António Pina
- Oct 2021 - Jun 2022 **Executive Secretary**
Associação de Pais e Encarregados de Educação da Escola Básica Manuel António Pina