

PERSONAL INFORMATION

Fernando Luz

 Vila Nova de Gaia - Portugal

 prof.fernando.luz@gmail.com

 <https://github.com/fluz>

 <https://www.linkedin.com/in/f-luz/>

POSITION Engineering Manager

WORK EXPERIENCE

2022 - Present Engineering Manager

Talkdesk

Management of the **HLS — Healthcare & Life Science stream** and **Support stream** at Industries BU. (manager of **10+** Individual Contributors from entry levels to leads)

The HLS stream is responsible for **Healthcare Experience Cloud** development, integrating healthcare call centers with unified patient information.

The Support stream teams are composed of two squads. The **Cross Industries** team implements tools and integrations to be used in other projects in our BU. The **QA team** provides a framework and procedure to validate the quality of our products.

- Achievements:
- Release of Agent Flows project (integration between EDP, Talkdesk and Zingtree) in Summer'22 release in 7 months (team creation, backlog organization and implementation);
 - Restructure the **QA implementation process**, providing some guidance how support the teams and organizing the backlog;
 - Define and implement the 1:1 weekly meetings and growth plans for each Individual Contributors and promote the link between each IC to the Talkdesk V2M2 (Vision, Value, Method and Metrics).

2021 - 2022 Senior Software Engineer

Talkdesk

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

The tech stack in this project uses **Kotlin (BE)**, **SpringBoot**, **React (FE)**, **Redis**, **PostgreSQL**, **MongoDB**, **RabbitMQ**.

- Achievements:
- Release the first version of Visual IVR for Financial Services in the Summer release;
 - Created a in-house solution for Visual IVR Frontend;
 - Present some technical sessions to present new technologies (Functional Programming, K6).

2018 - 2021 Senior Software Engineer

Capgemini Portugal [ASML Project]

Responsible to start the **ASML** project, where I contributed in **Variant Pattern** implementation at the robot component to be used in next lithography machine generation (EXE-5000), and currently I'm leading the Portugal team to expand unit tests quality using a framework based on **gtest**. I was one of the founders in the Meetup internal group in Altran PT.

- Achievements:
- Delivered first version for RYUN (Universal Pick and Place Robot) component, with **all features planned** for this version;
 - Added unit tests for RYUN component with **100% of code coverage**;
 - Contributed with the RYAU component **migration** to legacy version;
 - Generated an investigation 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**).

2016 - 2018 IT Manager

Technomar Engineering

Managed the team responsible to implement new features in the **TMS (Technomar Maritime Simulator)**. **TMS** is a vessel maneuver simulator used in training activities. **Launched** the certification planning for **TMS** simulator by DNV GL agency, and the **collaborated** in the the core of hydrodynamic numerical model applied in a “full bridge” simulator. **Cultivated** good practices in software development process, such as **Scrum/Kanban** board, **TDD**, **Git** adoption and **mentored** meeting sessions to promote the homogenization of the knowledge of the team.

- Achievements:
- Enhanced in communication channel using the phonon framework, with gains in **15% speedup** and improve the code maintainability;
 - Redesigned the database in MongoDB, with a **definition of a schema** to be use in DB, and implemented a unified access library to access the data;
 - Orchestrated the **full delivery** of new simulation station at Technomar office, providing a simulator with 360 degrees immersion.
 - Instituted **Gitlab** as 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

My role in the TPN laboratory was to develop a set of applications with **High-Performance Computing**. The languages I use was **C++/C**, **Python**, **MPI/sockets** and **bash** in Linux and Windows environment. Other duties includes testing and validation of numerical simulations, optimization, implementation of parallel improvements and integration with other projects. I also worked in others several projects, including the first version of **vessel maneuver simulator** called **SMH**. This project was select as finalist of **ANP (National Petroleum Agency)** Prize Award for Technological Innovation in 2016.

- Achievements:
- Optimized parallel execution of the numerical solver in the cluster environment saving around **35% in resources** using my Ph.D. research;
 - Minimized around **10% the time execution** in the standalone version of the numerical solver using OpenMP;
 - Reduced in order to **60% the storage space** with the output results of the application using a binary format;
 - Championed and implemented a **cross compilation** in Windows and Linux environment with CMake;
 - Introduced a **MPI communication** instead pure socket, providing more robustness in the communication channel;
 - Championed the use of *tests in development* flow to increase the development quality;
 - 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, manage homeworks, laboratory activities, exams preparation and grading.

EDUCATION AND TRAINING

2010 - 2015 **Ph.D. in Computing Engineering**

Title Methodology for 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