

DIOGO SOBRAL

Senior Software Engineering Student

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EDUCATION

Integrated Master's in Informatics Engineering

University of Minho

📅 Sep, 2016 – Present

📍 Braga, Portugal

- Currently at 5th Year
- Areas of Expertise: Distributed Systems and Parallel and Distributed Computing
- GPA: 17/20

English Classes

The British Institute of Braga

📅 2008 – 2015

📍 Braga, Portugal

- Finished with level C1 in English.

EXPERIENCE

Project Manager

Informatics Engineering Project

📅 Sep, 2020 – Feb, 2021

📍 Braga, Portugal

Project Manager of Nite, a digital drinking card for pubs and nightclubs. Nite provides a system that empowers the experience of a customer when at one of these establishments by allowing digital payments and remote control of each card. The team had nine people from different backgrounds and forced me to build team spirit, solve internal issues, and coordinate multiple tasks.

Summer Intern

Any Brain

📅 Jul, 2019 – Sep, 2019

📍 Braga, Portugal

Any Brain develops machine learning software to detect video game fraud. My job was split into two tasks. The first one required an analysis of multiple machine learning algorithms implementation such as *LighGBM*, *H2O*, and *Sci-Kit* in a dataset provided by them. The second was the development of a local cache using *Redis* to reduce the charge placed in both the system and the network.

AREAS OF INTEREST

- Self-awareness and Self-development
- Social Impact
- Performance Engineering
- Full stack developer
- Reading

CO-CURRICULAR/ EVENTS

Human Resources Member

U.DREAM

📅 Oct, 2019 – Present

📍 Braga, Portugal

U.DREAM is an educational project which has the mission of educating students on social impact. This project focus on solving three main issues related to the difficulty of finding individual purpose, managing relations, and generate social impact in your community. The students work not only with self-development but are also involved in social experiences like accompaniments to families whose kids have serious health issues or nursing homes.

House Rehabilitation in Rural Areas

Just a Change

📅 Ago, 2020

📍 Vila Pouca de Aguiar, Portugal

Just a Change is a nonprofit organization that rehabilitates houses in rural and poor areas of Portugal. As part of their "Camp In" initiative, I spent 13 intensive days rehabilitating a house of an elderly man that lived in inhuman conditions.

Head of External Relations Division

SEI'19

📅 Oct, 2018 – Feb, 2019

📍 Braga, Portugal

SEI'19 is an annual event organized by a group of software engineering students which focuses on enriching all the students of this degree with a set of workshops and talks about new themes. The External Relations Division is responsible for establishing the link between the organization of the event and all attendant companies.

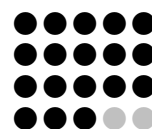
TECHNICAL SKILLS

C, C++, Java, Python

MySQL, MongoDB, OpenMP, MPI

React Native, Redux

Erlang, ZeroMQ, React, Electron, Haskell



SPORTS

A table tennis lover. Over the years participated in many singular and team competitions. In the last 2 years, I was able to play at the 2nd Division of the Portuguese League which helped me develop my team spirit and taught me how to deal with pressure.

PROJECTS

Nite

Product Development

📅 Seq, 2020 – Feb, 2021

Nite is a software system that enables the use of digital cards inside pubs and nightclubs. The whole system has four main components, a customer and a worker app both built using React Native, a web application for the management, and back-end architecture designed using microservices. I was the team leader and had to schedule timelines, deal with internal issues, and promote a healthy environment. From a technical point of view, I worked on the customer application using Redux and React Native to build an appealing and intuitive app. This component integrates payment using stripe and also provides NFC reading for some custom physic card.

Sparse Matrix-Vector Multiplication Optimization

Performance analysis

📅 Oct, 2019 – Dec, 2019

🔗 [GitHub](#)

Designed and implemented optimized parallel solutions for SpMV multiplication using both COO and CRS representations. The goal of this project was to efficiently use the resources of a machine with NUMA architecture in a cluster. The developed solutions used 3 different approaches: shared memory (*OpenMP*), distributed memory (*MPI*), and hybrid.

meTodo

Desktop Application

📅 Mar, 2020 – Jul, 2021

🔗 [Github](#)

Using electron and vue.js, my team built a desktop standalone application that collected data about our user's daily tasks. A user was able to synchronize its application with his *Google*, *Github*, and *Outlook* accounts, and then our application would analyze the data collected and show it to the user, all in one place. In a later stage of the project, the team wanted to add access to the application data remotely. So we developed a Rest application using *node.js* and designed a protocol to synchronize the local data with the data on the cloud.

Fault-Tolerant Supermarket

Java Application

📅 Jun, 2020

🔗 [GitHub](#)

A simple fault-tolerant supermarket application that tolerates changes in the number of processes of the system. This solution was built using the *Spread* toolkit and implements a passive replication protocol to handle every request. The system allows multiple operations to take place simultaneously if they use distinct resources.