



# SAMUEL CARINHAS

SOFTWARE DEVELOPER

## CONTACT

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## LANGUAGES

Portuguese - Native

English - C1

## EDUCATION

**BACHELOR'S DEGREE IN COMPUTER SCIENCE AND ENGINEERING**

**University of Coimbra**

2019-2022

Grade: 17

**MASTER'S DEGREE IN COMPUTER SCIENCE AND ENGINEERING**

**University of Coimbra**

2022-2024

Grade: 17

## SKILLS

- Angular
- Assembly MIPS
- C
- C#
- C++
- CSS
- Docker
- Figma
- Git
- HTML
- Java
- JavaScript
- Kotlin
- LaTeX
- MATLAB
- MongoDB
- PostgreSQL
- Python
- ReactJS
- Spring Boot
- TensorFlow

## ABOUT ME

My journey in programming began in high school, where I joined the Programming and Robotics Club and competed in several major programming competitions across Portugal. This early exposure ignited my passion for coding and problem-solving, leading me to pursue a degree at the University of Coimbra. During my time at university, I continued to compete in programming contests and became an active member of the TOPDEI competitive programming group.

Beyond my love for competitive programming, I have a strong affinity for teamwork and collaboration. I was actively involved in the NEI (Núcleo de Estudantes de Informática), where I played a key role in organizing and coordinating events, website development, and programming contests. In my final year, I had the privilege of leading the development of Shift Appens, one of Portugal's largest hackathons, and launching the inaugural edition of the Shift Appens Academy, an initiative aimed at introducing high school students to programming.

## WORK EXPERIENCE

### Volunteer Instructor

2022-2022

After School

Provided guidance to young children in the Computer Architecture I course offered by After School, organized by treetree2.

### Python Software Developer

2021-2022

ZEGAMI / DCSL

4 months full-time job working as a python engineer for Zegami and DCSL.

### Summer Internship

2021-2021

Instituto Pedro Nunes

Developed a project management website using Angular and Entity Framework.

## RESEARCH EXPERIENCE

### Algorithms for Network Interdiction Problems

2020-2021

FCTUC

Researched and developed algorithms to maximize network disruption while minimizing costs, utilizing branch-and-bound methods and heuristic techniques.

### Thertact-VR enabled Serious Games

2022-2023

FCTUC

Developed features to enhance user focus in a state-of-the-art VR application built with the Unity engine. This application improves body movement perception for individuals with paralysis, helping them prepare for the use of robotic prosthetics in walking rehabilitation.

### Frontend and Optimization Model for the Nexus

2023-2024

### Haulier Capacity Matching

FCTUC

Developed a metaheuristic solution to optimize truck routes within the Port of Sines, along with a frontend interface for various stakeholders to interact with the algorithms and view their cargo routing plans.

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## EXTRA CURRICULAR ACTIVITIES

### TOPDEI

2019-2024

TOPDEI is the competitive programming group at the University of Coimbra, which I have been a part of since I began my course. Through this group, I have deepened my knowledge of algorithms and advanced data structures. Additionally, I have participated in programming contests and secured internships focused on algorithms, meta-heuristics and data structures.

### NEI

2022-2024

The Informatics Student Association (NEI) at the University of Coimbra is where I collaborated on many of my team projects. During my time with NEI, I developed various websites and applications for the student community using technologies such as ReactJS, React Native, JavaScript, and Express. Additionally, I organized several events, including programming contests, which further enhanced my problem-solving skills.

### Shift Appens

2023-2024

I led the development team for the 2024 edition of Shift Appens, where I was responsible for developing an interactive website that enabled participants to register their teams. Additionally, I designed and implemented an AI challenge for the Shift Appens Academy event.

## COMPETITIONS

### ToPaS

Participations: 3, Best Score: 3th place

Programming Contest for High School Students at University of Porto

### TECLA

Participations: 3, Best Score: 4th place

Programming Contest for High School Students at University of Aveiro

### ONI

Participations: 2, Best Score: 10th place

Portugal National Olympiad of Informatics

### FNR

Participations: 2

Portugal National Robotics Festival

### MIUP

Participations: 4, Best Score: Bronze Medal

Portugal programming contest for universities

### SWERC

Participations: 4

Southwestern Europe Regional Contest

### Bot Olympics

Participations: 4, Best Score: 1st place

University robotic contest

### Firefighting Robot Competition

Participations: 3, Best Score: 1st place

Firefighting competition Polytechnic Institute of Guarda

### Google HashCode

Participations: 3

Google

### Google Codejam

Participations: 3, Best Score: Round 2

Google

### TOPDEI Contests

Participations: 3, Best Score: 1st place

University of Coimbra programming contests

### Cloudflight Contest

Participations: 2, Best Score: 1st place at  
University of Coimbra HUB

Cloudflight