



# andré santos

technology, language and semantics

Updated February 9, 2026

## about

### contacts

github.com/andrefs   
cv@andrefs.com 

## languages

native portuguese  
fluent english  
basic spanish+french

## favorite tools

♥ TypeScript, Docker,  
Rust, ESP32, FreeCAD

## looking into

👁 Rust, Kubernetes,  
3D printing

## interests

Fullstack developer working with Node.js, TypeScript, Docker. Interested in semantic web, natural language processing, home automation and 3D printing.

## technical skills

### Languages

### Node.js, TypeScript

Also Rust, Perl

### Databases

### MongoDB

Also MySQL, PostgreSQL, graph databases

### Frameworks

### Svelte, Vue, React, Express

### and libraries

Also Nearley (parsing toolkit), Vega (data visualization)

### Other tools

### Linux, Docker, Git, Bash, LLMs

## relevant experience

2023 May to  
2026

### PhD, FCUP — [mapi.map.edu.pt](http://mapi.map.edu.pt), [up.pt/fcup](http://up.pt/fcup)

PhD candidate

Semantic measures in large semantic graphs

2022 Jan to  
2023 May

### Decipad, remote — [decipad.com](http://decipad.com)

Software engineer

Interactive notebook to explore data.

- improving and extending the grammar for an in-house developed language,
- implementing logic supporting complex editor components (e.g. symbols table),
- implementing React components on top of a Slate.js/Plate editor.

2017 Apr to  
2021 Dec

### INESC TEC, Porto

Research assistant

Research on semantic graphs and similarity measures.

- Created web game to build semantic similarity datasets: [stars.andrefs.com](http://stars.andrefs.com)
- Created a path-aware semantic web crawler: Derzis
- Created a Rust namespace-based semantic graph summarizer: Chilon

2018 Oct to  
2020 Sep

### University of Minho, Braga — [di.uminho.pt](http://di.uminho.pt), [elach.uminho.pt](http://elach.uminho.pt)

Guest assistant

professor

Teaching MSc classes:

- Natural Language Processing
- Data Analysis and Visualization

2016 Jul to  
2017 Mar

### Contentful GmbH, Berlin — [contentful.com](http://contentful.com)

JavaScript backend engineer

Headless API-first CMS.

- development and support of multiple Node.js APIs,
- implementing React components,
- writing and debugging PostgreSQL query generators.

2013–2015

### SAP0, Portugal Telecom, Lisbon — [sapo.pt](http://sapo.pt), [jornais.sapo.pt](http://jornais.sapo.pt)

Web developer

Largest Portuguese web portal.

- development and support of Node.js APIs,
- management of several MongoDB databases,
- development of Node.js and Perl back-offices and public-facing websites.

2011–2013

**Subvisual, Braga** – [subvisual.com](http://subvisual.com)

Sys admin

UX, UI, web and mobile development company.

- deployment and management of Unix-based servers, with Apache and MySQL services, and Ruby on Rails applications,
- development of helper scripts to automate server management tasks.

## education

2026

**MAP-i Doc. Prog. in Computer Science** Fac. of Sciences of Univ. of Porto, Portugal

Semantic measures in large semantic graphs (thesis)

Development of techniques for reducing large semantic graphs so traditional path-based semantic measures can be applied to them. Assessment of how well LLMs can estimate semantic relation values in comparison with human-annotated datasets.

180 ECTS

2012

**MSc in Bioinformatics** University of Minho, Portugal

Mining biological parameters from literature: an application to environmental decision support systems (thesis)

Development of a framework for building text mining applications for scientific literature, focused on numerical parameters and supported by 3rd-party tools and expert-curated ontologies.

120 ECTS, final grade 17/20

2011

**MSc in Natural Language Processing** University of Minho, Portugal

Contributions for building a Corpora-Flow System (thesis)

Development of a system to support automatic handling of corpora (cleaning, validation, format conversion), document alignment and calculation of alignability metrics of several types of documents.

120 ECTS, final grade 17/20

2009

**BSc in Software Engineering** University of Minho, Portugal

Computer science and engineering course

180 ECTS, final grade 15/20