



andré santos

technology, language and semantics

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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, up.pt/fcup

PhD candidate

Semantic measures in large semantic graphs

2022 Jan to
2023 May

Decipad, remote — 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
- Created a path-aware semantic web crawler: Derzis
- Created a Rust namespace-based semantic graph summarizer: Chillon

2018 Oct to
2020 Sep

University of Minho, Braga — di.uminho.pt, 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

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, 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

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