Curriculum Vitae

André Sá

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Portuguese	Native
English	C1 (self-assessment)
Japanese	B1 (BabeliUM Language Institute)

Education

Studied Computer Science at the University of Minho for my Bachelor's, and currently enrolled for my Master's in Informatics Engineering, also at the University of Minho, specializing in *Formal Methods* and *Distributed Systems*.

Professional Experience

Internship at Accenture (July 2019)

The assigned job was developing unfinished, as well as new, features for a consumer facing product. These entailed working with *Augmented Reality* in iOS. In the process, I've also learned about the Scrum development framework.

Application Security Analyst at Checkmarx (September 2019 ~ September 2021)

The job as an analyst consists in analysing existing security vulnerabilities, with or without a CVE number, the end goal being to learn which versions of the affected software are vulnerable in reality. Although I'm not tasked with software

development, apart from the occasional improvement to our internal tools of everyday use, as vulnerabilities are found in a wide range of projects, I come in contact with many languages, with the most common being C, Clojure, Java, JavaScript, PHP and Python.

Software Engineer at Lamassu (September 2021 ~ present)

Responsible for maintaining and refactoring existing code and developing new features, using almost exclusively JavaScript on Node.js and React projects. Getting to learn a lot about blockchain research and especially cryptocurrency, but also the mess that is JavaScript... Work involves usual web development, both back- and front-end, but also development of internal-use libraries to interface with cryptocurrency nodes and servers. Biggest feature yet was replacing an old, and pretty *ad-hoc*, `REST`-like machine-server interface with a very strict GraphQL one.

Additional Information

Open Source Work

On my spare time I work on personal projects and contribute to open source projects, such as IPFS and the CHICKEN Scheme ecosystem. The most notable among them:

https://github.com/siiky/ipfs.scm & https://github.com/siiky/ipfs.lua
Author & maintainer of IPFS HTTP RPC clients in CHICKEN Scheme and Lua.
https://github.com/siiky/invidious.scm Author & maintainer of an Invidious REST API client in CHICKEN Scheme.
https://github.com/siiky/transmission.scm Author & maintainer of a Transmission RPC client in CHICKEN Scheme.
https://www.phpmyadmin.net Found and responsibly disclosed CVE-2020-26935, while working at Checkmarx.
https://github.com/siiky/c-utils Type-generic data structures and utilities written in C, tested with QuickCheck-like tests.
https://github.com/universal-ctags/ctags Found and fixed two `NULL`-dereference bugs.
https://github.com/iraikov/chicken-unitconv Changed all constants to exact numbers, to improve precision.

Areas of Interest

I have a special interest in functional and distributed programming and in code quality. I believe low-level and performance to be very important aspects of programming and programming languages, and because of this, the languages that have caught my eyes most recently are Elixir, CHICKEN Scheme, and Rust.

I'm a big proponent of the FLOSS movement and sharing of knowledge in general.

Programming Languages

From University and personal projects, the languages that I have experience with, enjoyed working with, and would like to work with again:

- Erlang
- Scheme
- C
- Haskell

From reading books, papers and blogs, the languages that I would like to learn:

- Elixir – the "next-gen" Erlang, with lots of new features, and good tooling;
- Rust – safe systems language, with an advanced type system;
- Idris – for playing with types;
- Go – for simple concurrency management;
- Common Lisp – for advanced metaprogramming and arbitrary compile-time computation.

Events

I have participated in programming contests, such as Google Hash Code, Google Code Jam, Google Kickstart, MIUP and Battle of Universities.