André Albuquerque *April 4, 1987*

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Summary

Geek at heart, thoroughly enjoys learning new skills and writing quality code to solve interesting challenges. Likes to think about software engineering as a collaborative process to solve specific problems in a reliable and future-proof way.

Had his first contact with computers, a ZX Spectrum+, at the age of three (1990) and wrote his first lines of code to change the GORILLA.BAS game bundled with MS-DOS 5, on the 486 computer he got as a birthday present at the age of nine. Knew from an early age that he wanted to be a computer engineer, graduated at the age of 22 with a MSc degree in Information Systems and Computer Engineering from the best engineering school in Portugal.

He is a software engineer at Onfido, after working in the banking industry for seven years. During this banking detour he obtained a master's degree in economics. He is currently developing Onfido's microservices using Elixir, Ruby and Python, learning every day about how applications can thrive if the correct tools and sound coding practices are applied from the very beginning.

He recently co-authored a book on Elixir, Mastering Elixir, that takes the reader in a journey to develop and deploy on the cloud a Dropbox-like application.

Experience

Onfido
Lisbon, Portugal

Senior Software Engineer - Team Lead *Aug '19 – present*

Team Lead of the Operations Tech team, whose mission is to improve all internal systems to better enable the business for the rapid growth phase we're experiencing.

- Started with a complete revamp of the billing system, by removing the existing billing logic from our Rails monolith and creating two new Elixir microservices. The billing system is now event-based and region agnostic using Amazon's SNS and SQS infrastructure.
- Deliver a new internal system for account management, replacing the legacy experience and automating all the information queries by interfacing with Salesforce.
- Use this opportunity to refactor a big chunk of the Rails monolith, improving the user experience of our internal users and significantly reducing tech debt.

Senior Software Engineer *Aug '18 – Aug '19*

Software engineer on the Distributed Identity team, exploring new ways of providing Identity-based services to our customers. Analysing different identity solutions and implementing prototypes to better understand the technologies under scrutiny.

- Implemented an identity credentialing system based on Uport solution, that integrated with Onfido identity verification platform.
- Implemented an identity credentialing system using Evernym, that integrated with Onfido identity verification platform.

Software Engineer *Oct '16 – Aug '18*

Software engineer on the Identify and later Biometrics team, maintaining our current provider integrations living in our Ruby on Rails monolith platform and creating new integrations/migrating old ones to new microservices in Ruby and Elixir.

- Created a new S3 document storage microservice, using Elixir processes to implement a caching mechanism and performing the encryption/decryption tasks. Its usage reduced the network bandwidth of our document processing pipeline from 20 Mbps to 300Kbps.
- Implemented the mechanism in Elixir that calls all the algorithms developed in-house and our external providers in parallel and later aggregates the different results.
- Extracted several provider integrations from our monolith to new microservices written in Ruby.
- Used an AWS API Gateway + Lambda to create a secure callback mechanism, allowing an external provider to asynchronously reply to us.

Bank of Portugal, Payment Systems Department
Lisbon, Portugal

IT Expert, Advisor *Sept '14 – Sept '16*

Overseer on the Payment Systems Department, advising and providing insights on IT subjects: SWIFT Continuity, Cyber security in FMIs, digital currencies, online payment solutions, development of new information systems. Represented the central bank on the ECB Oversight Group assessing the SEPA Direct Debit Scheme compliance.

- Wrote a comprehensive study on blockchain technology (82 pages), virtual currencies and their possible risks and impact on the financial system.

Bank of Portugal, Information Systems and Technology Department LISBON, PORTUGAL
Team Leader *Jan '11 – Sept '14*

Team leader on the IT Department, performed requirements analysis, improved and maintained some of our legacy systems. Defined the architecture of new projects and routinely supported the deployment of new versions to production environments.

- Developed several Web Services interfaces (using an ESB as a proxy when needed) within different applications to fetch the ECB's machine lists. XSD, WSDL, SOAP, ASP.NET Web Services, TLS/SSL certificates.
- Did the maintenance and new developments of the eligible assets database application, a Java web application. Spring Framework (MVC, IoC, Security – using LDAP –, JPA), Hibernate 3, MySQL, SVN.
- Contributed to the requirements analysis, defined the architecture and further development of two ASP.NET MVC web applications, allowing the banks to report information via extranet and its subsequent analysis using an intranet web app. ASP.NET MVC 3, NUnit, Microsoft SQL Server, jQuery, TFS.
- Did the maintenance, new developments (as well as support and on-call tasks) of our most critical system, TARGET2-PT, our integration with the European real-time gross settlement system. ASP.NET Web Forms, Microsoft SQL Server, Sybase, WebSphere MQ, SourceSafe.

BOLD International LISBON, PORTUGAL
IT Consultant *Oct '10 – Jan '11*

Developed a web application to support and enhance the Technical Support Front Office of the main Portuguese Telco. ExtJS, Spring Framework (MVC, IoC, Security), Java EE (EJB 3.0, HornetQ, JPA), Oracle DB, JBoss 5.1, BPM.

everis LISBON, PORTUGAL
Consultant *Sept '09 – Sept '10*

Performed the functional certification of the software developed in-house in a medium-sized Portuguese bank. AS/400 (IBM System i), DB2.

Please refer to [André's LinkedIn profile](#) for a more complete list of work experience along with recommendations.

Education

School of Economics & Management —Univ. de Lisboa LISBON, PORTUGAL
MSc in Monetary and Financial Economics *Sept '14 – Oct '16*

Master thesis on the determinants of sovereign ratings using Stata. You can find a working paper based on my dissertation here.

Coursework: Macroeconomics; Microeconomics; Econometrics; Monetary Policy; Behavioral Finance; Public Finance; Macroeconomics and Monetary Theory; Financial Economics; Financial Markets.

Instituto Superior Técnico —Univ. de Lisboa LISBON, PORTUGAL
MSc in Information Systems and Computer Engineering, 15/ 20 *Sept '07 – Oct '09*

Major in Distributed Systems, minor in Software Engineering.

Coursework: Software Architecture; Software Quality; Virtual Execution Environments; Mobile Computing; Network and Computers Security; Parallel and Distributed Computing.

BSc in Information Systems and Computer Engineering, 15/ 20 *Sept '04 – Jul '07*

Coursework: Software Engineering; Operating Systems; Databases; Computer Architecture; Analysis and Synthesis of Algorithms; Artificial Intelligence; Compilers; Computer Networks; Physics; Calculus; Algebra.

Skills

Technical expertise: Appreciates to work with Agile methodologies, using continuous delivery whenever possible (knowledgeable about Gitlab CI, Jenkins and Travis CI). Likes functional programming, enjoys working with Elixir/Ruby/Python/C♯ and Node.js. Experienced with Phoenix and Rails web frameworks, virtualization/containerization (Docker, Kubernetes and several AWS solutions) and DevOps (Terraform). Linux and vim user. Loves Git.

Natural languages: Portuguese (*mother tongue*) and English (*full professional proficiency*).

Interests

Non-exhaustive and in alphabetical order: basketball, behavioral economics, blockchain applications, censorship resistant systems, custom and vintage keyboards, gymnastics, music, philosophy, privacy in the age of internet, running, travel, vim, virtual currencies.