

PERSONAL INFORMATION

Ivo Anjo, PhD

📍 Montijo, Lisbon (Portugal)

✉ ivo.anjo@ist.utl.pt

🌐 <https://ivoanjo.me> <https://linkedin.com/in/ivoanjo> | Latest CV @ <https://ivoanjo.me/cv>

WORK EXPERIENCE

Oct 2014–Present

Senior Software Engineer

Talkdesk, Inc

Currently working as a tech lead on a team that is building a new JRuby-based microservice pipeline for bulk parallel processing of contact data while also working on porting legacy systems to our new contact data access APIs.

Previously worked on building and deploying Talkdesk's first production Elixir microservice, the development of other Ruby-based backend microservices, and the call central, the soft real-time system which manages all phone calls for our customers and provides in-call management.

On my spare time I also work on discovering and promoting the use of modern Ruby/JRuby versions and techniques, improving shared Talkdesk libraries and on refactoring legacy systems, bringing them up-to-date with our current practices. I've documented part of this journey on my blog at <https://ivoanjo.me>.

Tech stack: Ruby, JRuby, Elixir, Elasticsearch, MongoDB, Redis, RabbitMQ, Twilio, Heroku

Sep 2009–Sep 2014

Junior PhD Researcher

Software Engineering Group (ESW) / INESC-ID Lisboa (Portugal)

Feb 2013–Jun 2013

Teaching Assistant for "Advanced Programming" course

Instituto Superior Técnico / Universidade de Lisboa (Portugal)

Sep 2009–Jan 2010

Teaching Assistant for "Software Architecture" course

Instituto Superior Técnico / Universidade de Lisboa (Portugal)

EDUCATION AND TRAINING

Jan 2010–Jun 2015

PhD in Information Systems and Computer Engineering

Instituto Superior Técnico / Universidade de Lisboa (Portugal)

Grade: Pass with Merit / **Thesis:** "*Speculative Parallelization of Object-Oriented Applications*"

Designed and implemented a framework to perform automatic parallelization at the bytecode level of sequential Java/JVM applications, supported by both Software Transactional Memory and a custom OpenJDK-based VM with support for first-class continuations.

Course Highlights: Transactional Systems, Non-Blocking Concurrency, Distributed Fault Tolerance

Sep 2007–Oct 2009

MSc in Information Systems and Computer Engineering

Instituto Superior Técnico / Universidade de Lisboa (Portugal)

Grade: 18 out of 20 / **Major:** Software Engineering / **Minor:** Distributed Systems

Sep 2004–Aug 2007

BSc in Information Systems and Computer Engineering

Instituto Superior Técnico / Universidade Técnica de Lisboa, Lisbon (Portugal)

PERSONAL SKILLS

Mother tongue(s) Portuguese

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Digital competence

- Actively working on expanding my knowledge of Ruby and exploring different Ruby implementations (JRuby, TruffleRuby) and Ruby-like languages (Elixir).
- Experience with various concurrency and synchronization approaches: locking, transactional memory, actors, non-blocking concurrency, atomic operations and immutability.
- Programming experience in several languages: Java, Ruby (expert); Elixir, JavaScript, C++, C (prior experience).
- Open-source software and Linux enthusiast. I have been running Linux on my personal machines for 15+ years. Know my way around many distributions, how they are structured, and can tell what most used packages and services are used for just by name. I was a member of the local LUG at my college for several years.
- I enjoy contributing to open-source projects with code, debugging issues, and bug reports.

ADDITIONAL INFORMATION

Tech talks <https://github.com/ivoanjo/talks>

Selected open-source contributions

- `pry-debugger-jruby` gem: JRuby debugging library for use with the Pry REPL
- `JRuby`: bug fixes and performance optimizations
- Contributed to several ruby gems: `concurrent-ruby`, `march_hare`, `hyperclient`, `hal-client`, `dry-container`, `redlock-rb` (among others)
- `Fénix Framework` (Java STM-based web framework): hibernate-search (lucene) integration, transaction introspection module
- `JVSTM` (Java software transactional memory): performance optimizations and implementation of transactional arrays
- `JaSPEX-MLS` (Java/Java Bytecode): framework design & implementation
- `Advice library` (Java Bytecode): library design & implementation

See also my GitHub profile: <https://github.com/ivoanjo>

Publications

- Complete list available at my Google Scholar profile: <http://ivoanjo.me/scholar>
- I. Anjo, J. Cachopo, "Design of a Method-Level Speculation framework for boosting irregular JVM applications", Journal of Parallel and Distributed Computing, 87:13-25, 2016
 - I. Anjo, J. Cachopo, "Improving Continuation-Powered Method-Level Speculation for JVM Applications", 13th Int. Conf. on Algorithms and Architectures for Parallel Processing, 2013
 - I. Anjo, J. Cachopo, "A Software-based Method-Level Speculation Framework for the Java Platform", 25th Int. Workshop on Languages and Compilers for Parallel Computing, 2012
 - I. Anjo, J. Cachopo, "Lightweight Transactional Arrays for Read-Dominated Workloads", 11th Int. Conf. on Algorithms and Architectures for Parallel Processing, 2011