

Jorge Diz Pico | Backend software engineer

based in A Coruña – Spain

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Work experience

Senior Developer

Sep. 2021 - now

Erlang Solutions, remotely

Consulting work for banking clients.

Backend software engineer

Feb. 2018 - Aug. 2021

Telefónica Digital, Madrid (Spain)

As part of the different teams inside Project Novum, I was tasked with **designing and coding in Erlang, Kotlin and PHP** for our microservices architecture, which supported 10+ million customers worldwide, including:

- Being one of the **main full-picture experts** in our push notification pipeline, from designing and implementing the components interacting with the providers APIs (Google, Apple, Webpush) and storing the messages and subscriptions, to managing profile deployments and configuration for all our environments
- Developing our backbone backend component in charge of **persistent asynchronous communication** with the mobile applications to serve them information, events and API responses through **WebSockets**
- Writing and reviewing **technical specifications** references for new developments
- **Weeding out candidates** in the first stages of the hiring process according to test and interview results

Fullstack software engineer

Feb. 2015 - Dec. 2017

Universitat Pompeu Fabra, Barcelona (Spain)

Hired as research staff for the following **NLP projects**, among others:

- **LPS-Bigger** (Prof. Núria Bel): Researched and implemented a Python pipeline for **classification of social media texts** into marketing categories. The algorithm I designed combined NLP preprocessing, **word embeddings** (word2vec) and machine learning classifiers (SVM) to model **sentiment and topic analysis**. The resulting component had to be architected and deployed **in coordination with partners** such as Indra Software Labs or HAVAS MEDIA Group.
- **INSIGHT** (Prof. Luc Steels): Designed and developed **d3.js Javascript animations** of the evolving neurodynamics from agent-based experiments on contact-learning grammar. Made small improvements and adjustments on the **underlying Lisp base framework**.

Erlang backend engineer

Nov. 2012 - Jan. 2015

Nomasytems S.L., A Coruña and Madrid (Spain)

Erlang consultancy for international corporations:

- **Inditex**: Produced the initial prototype for an Erlang **parallel architecture** for text notification storage, queuing (**RabbitMQ**) and **mobile push delivery**, serving millions of customers, while accounting for future customer scalability as well existing technical requirements such as hot deployment.
- **Tuenti (Telefónica Digital)**: Developed and scaled new architectural features for the central chat dispatching system such as **VoIP calls** or **performance optimization** reworks in both software and protocol. One of them reduced login time by **a factor of 7**. The production cluster comfortably served more than a **million concurrent users**.

Intern machine learning developer

Nov. 2011 - May 2012

Jobssy S.L., Madrid (Spain)

Researched and developed a bidirectional **recommendation engine** to match job offers and job candidates, according to management and client specs. The software was developed in **Java** and was based on **Apache Mahout** for document clustering and **Apache Solr** for fulltext search.

Education

Computer Science and Engineering degree

300 credits

Universidade da Coruña, A Coruña (Spain)

- Degree thesis: *Analysis, design and implementation of a push notification framework*

MSc in Computer Science: Algorithms, Languages and Logic

120 credits

Chalmers University of Technology, Göteborg (Sweden)

- Master thesis: *A natural language interface for a music database*

Other merits

2016: 8.000€ grant from A Coruña's Provincial Government for the development of a prototypal NLP library for text processing and automatic neologism extraction.

2012: First place in the level generation track for the Mario AI Championship with an adaptive procedural algorithm based on a custom grammatical representation of gameplay elements.

Languages

High: Galician (native), Spanish (native), English (C2 Cambridge certified)

Medium: Catalan (B2 UB certified), French (B2), Portuguese (B1)