

Work Experience

September 2020 **Software Engineer at Meta Platforms (former Facebook Inc.)** in London, United Kingdom

Current

Since I joined Meta, I have worked in three different teams with very different scope.

- *Click-to-WhatsApp* (IC), where our goal was to drive adoption and improve the performance of ads that lead users to open a conversation via WhatsApp with the advertisers.
- *Creators As Marketers* (IC), where we developed from scratch the Affiliate program. As a backend engineer, I worked on the cross-app infrastructure to allow content creators to discover products to recommend, as well as allow advertisers to discover creators to partner with.
- *Catalog* (as TL), where I am currently leading a team of 8 people to improve the sourcing and utilization of signals coming from Pixels and Apps to improve the performance of Dynamic Ads

Technologies used: *Data analysis with Python and SQL, app development with Hack, React and GraphQL.*

July 2019

October 2019

Research Intern at Meta Platforms (former Facebook Inc.) in Palo Alto, USA

Built a prototype of a grammar-based compressor that achieved compression ratios comparable to the ones obtained with [zstd](#). The compressor relied on some parameters that were optimized using a genetic algorithm,

Technologies used: *Prototype built in C, using Python to implement the genetic algorithm.*

September 2016

September 2020

PhD Candidate at IMDEA Software Institute in Madrid, Spain

My PhD focuses on Applications of Language Theory. It is worth highlighting the development of [zearch](#), a tool for searching with regular expressions in compressed text which outperformed the state of the art technology. This work led to an Research Internship at Meta and a publication at the Data Compression Conference.

Technologies used: *Prototypes built in C, C++ and Python. Papers and Thesis written with LaTeX.*

June 2014

May 2016

Internships while finishing my University studies

- Jun'14 - May'15: Internship at IMDEA Software Institute in Madrid, Spain
- Jun'15 - Sep'15: Internship at Max Planck Institute in Kaiserslautern, Germany
- Sep'15 - May'16: Internship at IMDEA Software Institute in Madrid, Spain

Programming Skills

Languages

Advanced: C, Hack, React, Python, SQL

Medium: C++, Java, Bash, Awk, JavaScript, PHP, HTML, CSS, LaTeX

Basic: R, Assembly, Lisp, Prolog

Software

Linux, Sublime Text, Atom, VS Code, Git, SVN, Mercurial, Zsh, Excel, Google Sheets

Publications

The following is a list of my top 4 publications. The full list is available on [Google Scholar](#) and my [personal website](#)

A Congruence-Based Perspective on Finite Tree Automata

Published on *Fundamenta Informaticae* 2021

A Quasiorder-based Perspective on Residual Automata

Published on *Mathematical Foundations of Computer Science* 2020

Complete Abstractions for Checking Language Inclusion.

Published on *ACM Transactions on Computational Logic* 2021

Regular Expression Search on Compressed Text

Published on *Data Compression Conference* 2019

Education

- **PhD in Software, Systems and Computing** at Universidad Politécnica de Madrid
Cum Laude
- **Degree in Computer Science** at Universidad Autónoma de Madrid
GPA: 9.31 / 10 - Obtained 4 consecutive Excellence Awards for academic performance.
- **Degree in Mathematics** at Universidad Autónoma de Madrid
GPA: 8.95 / 10