

GUILLERMO JULIÁN MORENO

Software engineer & mathematician

PERSONAL DATA

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other links [Github](#) — [LinkedIn](#)

WORK EXPERIENCE

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| <i>March 2015</i>
<i>Present</i> | Senior Observability Engineer — Naudit HPCN
Madrid, Spain
<p>Naudit HPCN is the spin-off of the HPCN-UAM research group. In parallel with the studies for my bachelor degree, I continued there with my work on numeric algorithms and Linux capture driver development, and started working in automated network analysis tools and observability tools. I paused my work there between July of 2016 and January of 2017 to pursue my Master studies at EPFL (Switzerland). I also helped develop manage internal infrastructure for code hosting, software packaging/distribution and systems monitoring.</p> <p>My responsibilities included the ownership of several client-facing products (including team management for one of them), administration of capture probes at client sites (including banks and telco operators), and ownership and training of developer tools and internal monitoring systems.</p> |
| <i>July 2017</i>
<i>December 2017</i> | Software Engineering Intern — Nestlé Research Center
Lausanne, Switzerland
<p>As my internship for my Master in Computational Science and Engineering at École Polytechnique Fédérale de Lausanne (EPFL), I worked at the Nestlé Research Center developing an application for data analysis of intact protein results by Liquid Chromatography – High Resolution Mass Spectrometry (LC-HRMS). The goal was double: facilitating the scientist's labor of working with the data results from their tools, and also creating and developing models capable of providing insights about the analyzed products and samples.</p> |
| <i>December 2013</i>
<i>March 2015</i> | Intern — High Performance Computing and Networking - UAM
Madrid, Spain
<p>HPCN-UAM is a research group in the Universidad Autónoma de Madrid (UAM), where I familiarized myself with high performance networking and computing. I worked on network dependency analysis, Linux driver development for traffic capture, numeric algorithms optimizations with OpenCL and network protocol reverse engineering and analysis.</p> |
| <i>January 2012</i>
<i>January 2016</i> | Python, C#, C, C++ developer — Freelance
Remote
<p>During my studies at university, I also worked as a freelancer in several projects, mostly related to Windows Phone development, C# and networking in C/C++ — including dissectors and analyzers in OpenWRT routers. I designed and developed Windows Phone applications and assisted in the development, refactor and optimization of several projects in C# and C, and I also collaborated with eGarante in the design of a Firefox addon and a Python service to automatically sign user's conversations on social networks.</p> |
| <i>January 2010</i>
<i>October 2015</i> | Writer and Team coordinator — Weblogs SL
Remote
<p>During five years, I wrote about insights, news and analysis about web, software and technology in Genbeta and Xataka, two of the most visited spanish publications in their category. I was also responsible for the management of the Xataka Windows's editorial team and for its contents during its first two years (from 2013 to 2015).</p> |

EDUCATION

- 2016 - 2018 **MSc, Computational Science**
École Polytechnique Fédérale de Lausanne (Switzerland)
Grade: 5,12 / 6
Thesis: Automatic Estimation of Mixtures of alpha-stable distributions (grade: 6/6)
- 2011 - 2016 **Double degree, Mathematics and Computer Engineering**
Universidad Autónoma de Madrid (Spain)
Grade: 8,16/10
Thesis: Monitorization, capture and intelligent storage of network traffic at 40Gbps (grade: 10/10)
- 2009 - 2011 **International Baccalaureate**
Instituto Ramiro de Maeztu, Madrid

PUBLICATIONS

- [1] *Fast parallel α -stable distribution function evaluation and parameter estimation using OpenCL in GPG-PU's*. Guillermo Julián Moreno, Jorge E. López de Vergara, Iván González, Luis de Pedro, Javier Royuela del Val, and Federico Simmross Wattenberg. *Statistics and Computing*, 2016. URL <http://dx.doi.org/10.1007/s11222-016-9691-9>.
- [2] *Monitoring, capture and intelligent storage of network traffic at 40 Gbps*. Guillermo Julián Moreno, May 2016. URL <https://repositorio.uam.es/handle/10486/675469>. End of degree project.
- [3] Luis Velasco, Ll Gifre, J-L Izquierdo-Zaragoza, Guillermo Julián-Moreno, and JE López de Vergara. *Castor: An architecture to bring cognition to transport networks*. In *Optical Fiber Communication Conference*, pages Tu3D–5. Optical Society of America, 2018.
- [4] *On the design and performance evaluation of automatic traffic report generation systems with huge data volumes*. Carlos Vega Moreno, Eduardo Miravalls Sierra, Guillermo Julián Moreno, Jorge E López de Vergara, Eduardo Magaña, and Javier Aracil. *International Journal of Network Management*, 28(6):e2044, 2018.
- [5] *On the Feasibility of 40 Gbps Network Data Capture and Retention with General Purpose Hardware*. Guillermo Julián-Moreno, Rafael Leira, Jorge E. López de Vergara, Francisco J. Gómez-Arribas, and Iván González. 2018. URL <http://dx.doi.org/10.1145/3167132.3167238>.
- [6] *Performance assessment of 40 gbit/s off-the-shelf network cards for virtual network probes in 5g networks*. Rafael Leira, Guillermo Julián-Moreno, Iván González, Francisco J Gómez-Arribas, and Jorge E López de Vergara. *Computer Networks*, 152:133–143, 2019.
- [7] *Automatic estimation of mixtures of alpha-stable distributions*. Julián-Moreno, Guillermo. July 2018. URL http://gjuliamm.me/MasterThesis_JulianMoreno_MixturesAlphaStables.pdf. Master Thesis. Supervisor: Anthony C. Davison.

PROGRAMMING SKILLS

Languages - Advanced knowledge

C, C++, C#, Python, L^AT_EX, Bash, Awk.

Frameworks and environments

Ansible, Elasticsearch, GSL, Grafana, Linux kernel, Logstash, Loki, Node.js, Numpy, OpenCL, Pandas, Prometheus, Vue.js, React

Languages - Medium knowledge

Java, Javascript, HTML, CSS.

Main technologies and developer tools

VS Code, Vim, Zsh, Visual Studio, Git, Gitlab, CI/CD, Docker, Linux, OS X.

LANGUAGES

SPANISH · Mothertongue

ENGLISH · Advanced (conversationally fluent) - TOEFL 105/120

FRENCH · Medium - advanced

CATALAN · Medium (mainly spoken)

August 25, 2023