

Adrian Garcia Garcia

Curriculum vitae

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Description

I am a highly curious and passion driven individual that is always looking to grow as a professional and as a person. My dream job offers interesting technical challenges that are faced through teamwork and where the software we create actually makes a difference. Specially interested in diving into the Machine Learning and Security fields where I hope to transfer my researching skills to create great products.

Education

- 2017–2021 **PhD in Computer Science Engineering**, Complutense University of Madrid, cum laude mention Thesis manuscript.
- 2016–2018 **Master's Degree in Computer Science Engineering**, Complutense University of Madrid, Current average: 9,12. Academic Report.
- 2011–2016 **Bachelor's Degree in Computer Science Engineering**, Complutense University of Madrid, Average: 7,82 over 10. Academic Report.

Employment history

- Mar'22–Now **Backend Software Developer**, MonetDB Solutions, Amsterdam.
Benchmarked MonetDB columnar database versus other relevant DBMS like Postgres, MySQL or Clickhouse, rewriting SQL queries to adapt to different syntaxes and optimize performance. Also measured the overhead of different DBMS when running on top of docker.
- Apr'18–Dec'21 **PhD scholarship (UCM)**, Department of Computer Architecture and Automatics, Madrid.
Optimizing fairness and performance through scheduling and cache partitioning in Linux kernel modules. To compare different partitioning algorithms, we proposed an open-source simulator that seeks the optimal cache partitioning solution leveraging an ad-hoc B&B algorithm and ipyparallel/sklearn.
- Oct'17–Oct'18 **System Administrator**, UCM: Department of Computer Architecture and Automatics, Madrid.
Administred multiple Linux systems and maintained the physical and virtualized infraestructure (kvm).
- Nov'16–
Jun'17 **Collaboration fellowship by Spanish MECD**, Seven months researching and working for the Department of Computer Architecture and Automatics, Madrid.
- Apr'16–
Aug'16 **Internship in Software Development**, SATEC, Madrid.
Developed web applications in C# (.NET MVC), Razor and jQuery UI. Specifically, I contributed to build a web application for the government car management system.

Research articles

- Garcia-Garcia, A., Saez, J.C., Prieto, M.: "Contention-Aware Fair Scheduling for Asymmetric Single-ISA Multicore Systems". IEEE Transactions on Computers, 67 (12): 1703-1719. (2018). IF (JCR): 3.131. ISSN: 0018-9340; DOI: 10.1109/TC.2018.2836418. Impact index of **JCR Q1** by Computer Science, Hardware and Architecture (2018).
- Presented this article in the ICPP 2019 that took place in Kyoto: Garcia-Garcia, A., Saez, J.C., Castro, F. Prieto-Matias, M.: "LFOC: A Lightweight Fairness-Oriented Cache Clustering Policy for Commodity Multicores". In Proceedings of the 48th International Conference on Parallel Processing (ICPP '19): 14:1-14:10. (2019). ISBN: 978-1-4503-6295-5; DOI: 10.1145/3337821.3337925. **Ranked Class II** in GII-GRIN-SCIE (2018)
- Garcia-Garcia, A., Saez, J.C., Risco-Martin, J.L., Prieto, M.. "PBBCCache: An open-source parallel simulator for rapid prototyping and evaluation of cache-partitioning and cache-clustering policies". Journal of Computational Science, 42:101102, 2020. <https://doi.org/10.1016/j.jocs.2020.101102>. Impact index of **JCR Q1** by Computer Science, Theory and Methods (2020). Available on <https://github.com/pbbccache/cachesim>

Achievements

- December, 2021 **Obtained my PhD with cum laude mention.**
- June, 2016 **Graduated with special mention in the Final Project of my Bachelor's Degree.**
- 2011–2016 **Subjects passed with honors on the Bachelor's Degree in Computer Science Engineering.**
Operating Systems, Advanced Operating Systems and Networks, Computer Architecture, Linux and Android Internals, Computer Networks Security, Mobile and multicore parallel programming, Databases and Evaluation of Computer Systems

Additional information

- 12-30-1993 **Spanish, Native.**
- Sept. 2016 **English, Level: C1.**
- Cambridge certificates:
 - [First Certificate in English](#) (FCE), Madrid, April 2012.
 - [Certificate in Advanced English](#) (CAE), Madrid, September 2016.
- Nov. 2016 **Big Data: analysis with python, Complutense University of Madrid.**
Continious formation course of the UCM on web scraping from Twitter and different file formats and data manipulation using python libraries: numpy, matplotlib and pandas. [Certificate](#).

Other skills

Programming languages.

- **Python:** scikit-learn, pandas, numpy, matplotlib, ipyparallel.
- **Big Data:** Spark, Map Reduce, Hadoop File System.
- **Machine Learning** ([python implementations](#)):
 - Classification tree (ID3).
 - Complete Index (data compression: variable-bytes, elias-gamma or elias-delta).
 - Vectorial Index.
 - Naive Bayes.
- **C/C++:** Kernel modules (drivers/scheduling), OpenGL, OpenMP/MPI, Sockets.
- **Java:** Android app developement ([TheFridge](#)), Hibernate, JSP, Maven.
- **Web:** PHP, C# ASP.NET MVC (Razor), JavaScript (jQuery), CSS (Bootstrap).
- **Functional Programming:** Erlang, Maude.

Other technologies.

- **Databases:** SQL, MongoDB, Neo4J.
- **Network management and virtualization**
 - Persistent network configuration IPv4/IPv6 ([vtysh](#)).
 - Virtual machine management in servers with kvm ([virsh](#) y [virt-manager](#)).
 - Docker.
- **Security**
 - Penetration testing and tools (metasploit/JTR/hping3/nmap).
 - Firewall (iptables), network analysis (wireshark) and IDS (snort).