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'21-Now **Backend Software Developer**, *MonetDB Solutions*, Amsterdam.
I am mostly devoted to query optimization and benchmarking our columnar database system versus other relevant SQL players like Postgres, MySQL or Clickhouse. I also work with docker to test deployment to cloud platforms and how different DBs perform when virtualized.

Apr'18-Dec'21 **PhD scolarship (UCM)**, *Department of Compuer Architecture and Automatics*, Madrid.
. "Contention-aware scheduling and resource management for emerging multicore architectures": the main proposals were implemented in Linux kernel modules (C), but most of the experimental analysis and performance metrics was done in python (pandas/matlotlib), as well as some cluster parallelization (ipyparallel)

Oct'17-Oct'18 **System Administrator**, *UCM: Department of Compuer Architecture and Automatics*, Madrid.
. Administrated multiple Linux systems and maintained the physical and virtualized infraestructure (kvm).

Nov'16- **Collaboration fellowship by Spanish MECD**, *Seven months researching and working for the* Jun'17 *Department of Computer Architecture and Automatics*, Madrid.

Apr'16- **Internship in Software Developement**, *SATEC*, Madrid.
Aug'16 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.. "PBBCache: 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/pbbcache/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.
- ○ **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, CSS (Boostrap).
- ○ **Functional Programming**: Erlang, Maude.

Other technologies.
- ○ **Databases**: SQL, MongoDB, Neo4J.
- ○ **Big Data**: Spark, Map Reduce, Hadoop File System.
- ○ **Machine Learning** (python implementations):
  - – Classification trees (ID3).
  - – Complete Index (data compression: variable-bytes, elias-gamma or elias-delta).
  - – Vectorial Index.
  - – Naive Bayes.
- ○ **Network management and virtualization**
  - – Persistent network configuration IPv4/IPv6 (*vtysh*).
  - – Virtual machine management in servers with kvm (*virsh* y *virt-manager*).
  - – Docker.
  - – Firewall deployment and network analysis skills (wireshark/IDS)