

Alberto Cortés

Curriculum Vitæ

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General Information

Languages Spanish (native)
English (fluent, equivalent to CEFR C2 or Proficiency CPE)

GitHub <https://github.com/alcortesm>

ResearcherId <http://www.researcherid.com/rid/L-5343-2014>

LinkedIn <https://www.linkedin.com/in/alcortesm>

Desired Employment and Skills

I am looking for full remote jobs as a Go programmer.

During my academic years, I developed keen critical thinking skills and a high understanding of the core, theoretical concepts of computation and networking; I feel comfortable working with the mathematics of sophisticated data structures and algorithms.

As part of my current career path as a developer, I have acquired the practical skills needed in a professional setting and focus on maintainability and keeping complexity under control.

Computer Skills

Languages expert: Go, bash. Intermediate/previously: Java, C, octave, L^AT_EX, Node.js, C++, Python, Lua, Lisp, C#, SR, Prolog.

Tools and Technologies Expert: git (+internals), Docker and docker-compose, make, GraphQL, REST, AMQP (RabbitMQ), SQS, MongoDB, InfluxDB, CI/CD (CircleCI), cryptography (SSH, JWT, Auth0, PGP), telemetry (statsd, Grafana). Intermediate/previously: AWS, GCP, Graph DB (Neo4j), PostgreSQL, Redis, CI/CD (Bamboo, Travis), pthreads, tcpdump, sockets, strace, valgrind, gdb, GnuPlot, gRPC, Protocol Buffers, MessagePack, ns2, Omnet++, troff.

OSs Expert: Linux (user-land and kernel). Intermediate/previously: Plan9 (user-land and kernel), Windows XP, Symbian, Windows Mobile.

Protocols HTTP, TCP, IPv4, UDP. SCTP, POP3, IMAP, 802.11b/g, Ethernet...

Experience

- 2017-2020 **Back-End Programmer**, [Senseye](#), Southampton, UK.
- Condition monitoring and predictive maintenance for factory assets
 - Full remote, team of ≈ 10 back-end programmers, agile methodologies
 - ≈ 100 services, ≈ 2 -8 deploys to production per day
 - Common tasks: adding new functionality and enabling the system to scale.
 - Personal focus: maintainability, testing and keeping tech debt under control
- 2015-2017 **Back-End Programmer**, *source{d}*, Madrid, Spain.
- Data processing pipeline for analysing git repositories
 - Team of ≈ 1 -4 programmers
 - A Git internals re-implementation in Go ([go-git](#))
 - Abstract Syntax Trees generation and processing ([bblfsh](#))
 - Talks and blog posts:
 - Papers We Love Madrid meetup: [Diff and Blame: an intuitive overview](#)
 - Comparing Merkle trees: [Comparing Git trees in Go](#)
- 2004-2015 **Researcher and University Professor**, [UC3M](#), Madrid, Spain.
- Teaching programming, OSs, concurrency and transport layer network protocols
 - Experience writing technical documentation, presentations and public speaking
 - Designing/using plagiarism detectors, automatic submission/evaluation systems, code evaluation and benchmarking
 - Writing and evaluating scientific papers (see my [ResearcherId](#))
 - Giving talks and presentations at scientific conferences and workshops
 - Team management (undergraduates and researchers)
 - Research projects:
 - Measuring computational performance of mobile devices
 - Optimizing battery consumption of network protocols
 - Improving multihoming network protocols for streaming
 - Improving indoor localization techniques.
 - Writing deliverables and demos for public-funded research projects.

Education

- 2008-2012 **Ph.D. Telematics Engineering (Cum Laude)**, [UC3M](#), Madrid, Spain.
[My thesis](#) (in Spanish); main contributions: An SCTP modification to improve handovers, a synthetic filesystem for the Linux kernel to improve multihoming support and a theorem for optimizing probe scheduling for the detection of uniform random events.
- 2005-2007 **M.Sc. Telematics Engineering**, [UC3M](#), Madrid, Spain.
- 1995-2004 **B.Sc. Telecommunications Engineering (with Honours)**, [UC3M](#), Madrid, Spain.

Interests and Hobbies

The Go board game (囲碁, 11kyu), free climbing, mini painting, Rubik's cubes, hacking, Science Fiction books, juggling.