Alberto Cortés
Curriculum Vitæ

Madrid, Spain, UTC+1
✆ *+34 600 42 77 57*
✉ *alcortesm@gmail.com*

▬▬▬ 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, LaTeX, Node.js, C++, Python, Lua, Lisp, C#, SR, Prolog.
Tools and Technologies	Expert: git (+internals), Docker and docker-compose, make, GraphQL, REST, AMQP (RabittMQ), SQS, Mongodb, TSDB (InfluxDB), CI/CD (CircleCI), cryptography (SSH, JWT, Auth0, PGP...), telemetry (statsd, Grafana). Intermediate/previously: Graph databases (Neo4j), PostgreSQL, 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 $\approx$ 10 back-end programmers, agile methodologies
- $\approx$ 100 services, $\approx$ 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 $\approx$ 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.