

# Alberto Cortés

## Curriculum Vitæ

Madrid, Spain, UTC+1/+2

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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 (+5 years), bash. Intermediate/previously: Java, C, octave,  $\text{\LaTeX}$ , Node.js, C++, Python, Lua, Lisp, C#, SR, Prolog.

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

OSs Linux (user-land and kernel). Plan9 (user-land and kernel), Windows XP, Symbian, Windows Mobile.

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

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## Experience

- since 2020 **Senior Back-End Programmer**, [Couchbase](#), Remote, US, India, UK.
- Full remote, team of  $\approx 30$  engineers, agile methodologies
  - Product: Deploy kubernetes clusters running Couchbase for the clients.
  - Main tasks: monitoring, alerting.
  - Personal focus: maintainability, testing and keeping tech debt under control.
- 2017-2020 **Back-End Programmer**, [Senseye](#), Remote, UK, US.
- 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
  - Research projects: Measuring computational performance of mobile devices, Optimizing battery consumption of network protocols, Improving multihoming network protocols for streaming, Improving indoor localization techniques.

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## 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.

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## Interests and Hobbies

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