

# 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 a full remote job as a Go programmer writing distributed systems.

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 domain design, maintainability, and keeping complexity under control.

### Computer Skills

Languages expert: Go (+10 years), Previously: C, Java, octave,  $\text{\LaTeX}$ , Node.js, C++, Python, Lua, Lisp, C#, SR, Prolog.

Tools and Technologies git (+internals), Kubernetes, Docker, MongoDB, Redis, Clouds (AWS, GCP), CI (Gitlab CI/CD, CircleCI, Github Actions...), OpenTelemetry (Prometheus, Grafana), S3, SQS, SNS, Google PubSub, protobuf, gRPC, REST, Istio, OAuth, make, Bazel, AMQP (RabbitMQ), cryptography (SSH, IAM, JWT, Auth0, PGP), Couchbase, InfluxDB, GraphQL, PostgreSQL, pthreads, tcpdump, sockets, strace, valgrind, gdb, GnuPlot, gRPC, MessagePack, ns2, Omnet++, troff.

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

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

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## Experience

- 2021-2025 **Back-End Senior Developer**, [Faceit](#), now [EFG](#), full remote, UK
- Architected and maintained distributed systems serving millions of users
  - Developed greenfield, brownfield, and legacy systems
  - Worked both in product teams and in the core platform team
  - Owned and maintained critical shared libraries for core infrastructure components (databases, message brokers, observability, background processing)
  - Established backend engineering standards and best practices for the backend guild (6 product teams  $\approx$  30 developers); facilitated guild meetings and mentored junior/mid-level engineers
  - Maintained ownership of 2-6 production services
  - 1-4 daily deployments to production
  - Technical leadership focus: maintainability, testing, domain driven design and tech debt management
- 2020-2021 **Back-End Developer**, [Couchbase](#), full remote, US, India, UK
- Cloud team: writing monitoring software for kubernetes clusters running Couchbase
- 2017-2020 **Back-End Developer**, [Senseye](#), full remote, UK, US
- Condition monitoring and predictive maintenance for factory assets
  - $\approx$  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 Developer**, [source{d}](#), Madrid, Spain
- Data processing pipeline for analysing git repositories
  - 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.