

# Fernando González Cortés

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## Education

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Master's degree in Software Engineering

Universidad Politécnica de Valencia, Spain

June 2003

Fluent in English, French, German and Spanish.

## Employment

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### Freelance

November 2021 – Present

- Implementation of a serverless database at Scaleway. Currently in Beta.
- Implementation of client libraries for different cryptocurrency exchange APIs, for Menai Financial Group
- Development and maintenance of the *Know Your Business* (KYB) backend for Juni Technologies AB.

### Senior Software Engineer at Parknav

February 2019 – July 2021

- Responsible for the company CI/CD pipelines testing and deploying services in the K8s production cluster
- Responsible for monitoring production services.
- Replaced an Azure API gateway by Kong Ingress, saving the company 2000\$/month.
- Reduced cluster memory requirements by 50% by optimizing memory usage in data intensive services.
- Built a garage pricing API from beginning to end: implementation, testing, deployment, figuring out and implementing pricing models, etc.
- Applied machine learning models to partially automate the migration from map data between two Open Street Map versions, which allowed to upgrade the city maps more regularly at a lower cost.

### Freelance

October 2016 – December 2018

- Developed a collaborative map (<https://www.bankgeheimnisse.ch/map>) for the Association for the promotion of Swiss bench culture, to document benches in Switzerland. The map has more than 20.000 benches at the moment.
- Developed on my own initiative a real time map of public transport speed in Pays de Gex / Geneva showing current status, past data and 24 hours of predictions.

### FAO Geospatial Software Engineer

January 2013 – September 2016

- Developed a web application to publish country national forest data in the context of the different national REDD programs (*Reducing Emissions from Deforestation and Forest Degradation*). Deployed the application in Argentina, Paraguay and Ecuador.
- Fixed GeoServer bug: <https://osgeo-org.atlassian.net/browse/GEOS-7243>.

### Freelance

September 2008 – December 2013

- Developed a web tool to plan geotechnical studies for the Valencian Institute of Building.
- Built an application for image quality control in the context of the National Plan for Aerial Orthophotography in Extremadura region, Spain.
- Developed a query language to process spatial data regardless of its location (database, file,

web service) or format (shapefile, GML, PostGIS, TIFF, JPEG, etc.).

IRSTV-CNRS FR2488, Nantes, France

April 2007 – July 2008

- Development of a pseudo-SQL engine middleware to query data in different formats and locations.

University of Castilla-La Mancha, Albacete, Spain

April 2005 – July 2007

- Different projects related with webmapping and GIS desktop applications.

IVER T.I.

March 2002 – December 2004

- Developed the core of gvSIG, an open source desktop GIS application

## Technical Skills

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- *Programming languages:* **Java** and **Golang**. In a lesser degree Javascript and Python. **Bash** enthusiast.
- *CloudProviders:* I have worked with several **GCP** products during my stay in Parknav: Pub/Sub, Cloud Build, Cloud Storage, etc. Currently working at a cloud provider and learning the cloud from the inside.
- *Devops tools:* At the moment I am provisioning resources with **Terraform** and deploying services with **Ansible**.
- *Deployment:* I am at ease working with **K8s**. I have installed Ingress controllers (**Kong**, **Traefik**), configured service accounts or deployed cronjobs. Currently working a lot with **Docker**.
- *Monitoring:* I have set up logging aggregation using **Fluentbit**, **Elasticsearch** and **Kibana**. I am used to browse metrics and logs and set up alerts.
- *CI/CD:* Frequent user of CI/CD pipelines. I have set them up myself in **Gitlab** and **GCP Cloud Build**.
- *Distributed architectural patterns:* I have worked with **event sourcing**, solved consistency issues with idempotent operations and orchestrators (**temporal.io**), implemented self-healing **feedback loops**, asynchronous communication through messaging brokers, etc.
- *APIs:* I've written multiple **REST** APIs and I am also familiar with the **gRPC** interface.
- *Data:* **PostgreSQL** in depth (configuration, wire protocol). I have also used MySQL, Redis and many different messaging solutions (**NATS**, **Kafka**, **RabbitMQ**).
- *Frontend:* Used **React** extensively in the past. And other old technologies lost in the mist of time.
- *Machine Learning:* I have a small theoretical background on statistics and have created different models to predict road traffic, match data from two different databases, among others. Used **WEKA**, and **R**.
- *Geospatial:* I have worked many years with geospatial technologies: PostGIS, OSM, Mapbox, GeoServer, Leaflet, GDAL.

## Passions and Hobbies

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- *Drums:* Was a drum teacher for a year.
- *Nature & Sports:* Running, Climbing, Hiking surrounded by trees and the occasional animal.