FERNANDO GONZALEZ CORTES

- Address: c/Vinalopó 19, Ribarroja de Turia, 46190, Spain
- Telephone: +34 679669957
- Email: fergonco@gmail.com

TECHNOLOGIES AND LANGUAGES

- Cloud providers and services:
    - AWS, EC2, EKS, GCP, GKE, Cloud Build, Cloud Storage, Pub/Sub, Cloud SQL, Cloud Monitoring, Cloud logging.
- Build/Deployment: Kubernetes, Kustomize, Helm, Gradle, Maven, Jenkins.
- Monitoring: Prometheus, Datadog, Grafana
- Messaging: Kafka, ActiveMQ, Google Cloud Pub/Sub, Azure Event hubs.
- Interfaces: REST, GRPC
- Data: PostgreSQL, PostGIS, Hibernate, Gorm, MongoDB, BigQuery.
- Languages: Java, Golang, ECMAScript6/Javascript, Python, Bash.
- Backend: Spring Boot, Golang.
- Frontend: React, react-admin.
- GIS: PostGIS, OSM, Mapbox, GeoServer, Leaflet, GDAL.
- Machine learning: Weka, R.

WORK EXPERIENCE

Software Engineer III - Juni Technology AB (April 2022 - current)

- Extracted some responsibilities from a monolithic service into a new service following clean architecture guidelines and using Golang, gorm and PostgreSQL for persistence, Kafka and GRPC for interservice communication, Helm and k8s for deployment, Datadog for monitoring, Gitlab for CI/CD. Analytics importing production database with BigQuery.
- Improved customer onboarding process implementing a flow to request them more information, in the context of the kyb process (Know Your Business).

Freelance (Nov 2021 - March 2022)

- Developed Java clients for different cryptocurrency exchange APIs for Menai Financial Group, through Toptal.
- Worked on a traffic control application for Siemens (Yunex Traffic), using Java, Spring, K8s, Helm.

Moved with my family from France to Spain - (Jul 2021 - Nov 2021)

Staff Engineer - Parknav - (Dec 2020 - Jul 2021)

Senior Software Engineer - Parknav - (Feb 2019 - Dec 2020)

- Implemented the CI/CD system in charge of deploying the company production services using a Gradle plugin and Google Cloud Build.

- Normalized the K8s deployment scripts of all company services using Kustomize. Built a command line interface to manage the deployment of all services and jobs using Slack, Spring Shell and Google Pub/Sub.

- Managed GCP project and deployed services in production.

- Replaced an Azure API gateway by an installation of Kong Ingress in our own clusters, saving the company 2000$/month.

- Reduced cluster memory requirements to 80% by optimizing the memory usage in city probability calculation services.

- Built from scratch a microservice serving garage data: implementation, testing, scaling, figuring out and implementing pricing models, etc.

- Implemented an outdoor sensor solution that sends data to our services in real time using Raspberry PIs and Spring services hosted in the company K8s cluster.

- Applied machine learning models in order to merge two garage databases automatically using Weka, reducing the need for manual intervention.

- Reduced the cost of migrating map data between two OSM versions by writting an algorithm that matches ways while navigating both OSM graphs, old and new, simultaneously.

- Developed the company data portal (https://portal.parknav.com) using Spring, Postgresql, React-admin and Firebase authentication.

- Developed a portal to show case the company parking probabilities service (https://places.parknav.com) using Mapbox Vector Tiles.

Freelance - Several clients - (Oct 2016 - Dec 2018)

- Developed a web application (https://www.bankgeheimnisse.ch/map) for the Association for the promotion of Swiss bench culture, for documenting benches in Switzerland using Spring, PostgreSQL and AWS Beanstalk. The application had around 7000 benches and 600 users at the moment of leaving and it has continued to grow.

- 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. Used R for the statistical models, PostGIS for storing data, GeoServer for serving it and HTML/CSS/JS to present it.

- Automated the process chain to transform remote sensing data in vector formats consumed by agriculture machinery, using Python GDAL bindings.

Geospatial Software Engineer at FAO / United Nations (Jan 2013 - Sep 2016)

- Developed a web application to publish country national forest data in the context of the different national REDD programs using PostgreSQL/PostGIS, GeoServer, Servlet API and jQuery.

- Deployed the application in Argentina, Paraguay and Ecuador.

- Created data publication pipelines that reduced publication times by 25%, using Python, GDAL and Geoserver REST API.

- Automated testing and continuous integration in Travis CI.

- Fixed GeoServer bug: https://osgeo-org.atlassian.net/browse/GEOS-7243.

Freelance (Sep 2008 - Dec 2013)

- Developed a mobile client for a collaborative mapping platform using Android.

- Developed a web tool to plan geotechnical studies for the Valencian Institute of Building using Google Web Toolkit.

- Built an application for image quality control in the context of the National Plan for Aerial Orthophotography in Extremadura region, Spain, using Java Advanced Imaging.

- Developed an algorithm to calculate radiation and visibility in 3d urban environments using Java and JTS.

- Developed a domain specific language to process spatial data regardless of its location (database, file, web service) or format (shapefile, GML, PostGIS, TIFF, JPEG, etc.) using Java, Javacc and JTS.

Research Engineer at IRSTV-CNRS FR2488 (Apr 2007 - Jul 2008)

- Development of OrbisGIS, a GIS desktop application with a SQL engine middleware to query data in different formats and locations.

Freelance (Mar 2005 - Mar 2007)

- University of Castilla-La Mancha: Different projects related with webmapping and GIS desktop applications.

Java Software Engineer at IVER T.I. (Mar 2002 - Dec 2004)

- Developed the core of gvSIG, an open source desktop GIS application: http://www.gvsig.com/en/products/g desktop

EDUCATION

- 2003: Master's degree in software engineering at Universidad Politécnica de Valencia.

- Fluent in Spanish, English, French and German.

EXTRACURRICULAR

- Toptal talent: https://www.toptal.com/resume/fernando-gonzalez-cortes
- I have a blog: https://fergonco.org/blog.html
- Text based notation to write midi: http://fergonco.org/MusicJargon/
- Disk based Rtree implementation: https://github.com/fergonco/rtree