



Gonzalo Varela

Developer Sr.

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Summary

I am a software developer with experience in SQL Postgres + PostGIS databases and Python + Django. Specialized in GIS software with a working experience implementing and maintaining Geoserver and Geonode platforms, I'm looking for a workplace with strong focus on quality to acquire more experience in Design Patterns and programming best practices.

I have also worked extensively with Leaflet.js, MapboxGL and VectorTile server and ESRI technologies such as ArcGIS PRO, GeoEvent, AGOL, Data Pipelines, Notebooks and Dashboards
I am open to work as part of a team or individually.

Key Technologies

Python + Django, Jupyter Notebook, PostgreSQL, Geoserver, Geonetwork, GeoEvent, AGOL Data Pipelines, GeoJSON, PHP, QGIS, ArcGIS Pro

Languages

English - Intermediate

Habilities and Technologies

Documentation

PostgreSQL, SQL/PL-SQL

PostGIS

Python + Django

Geoserver, Geonetwork, Geonode, QGIS, GeoEvent, AGOL Data Pipelines, ArcGIS Pro

PHP

Apache Airflow

Bash, CSS, jQuery, HTML 5, LeafLetJS

Problem solving

Linux, Windows, MySQL, Programming, Code Igniter (mvc framework PHP)

Development, Web Services

Education / Courses

UNTREF University (2019 – Present day)

Bachelor in GIS (Geographic Information System)

FIUBA graduates center (2018)

Python for developers

FOSS4G-AR

Geonetwork Introduction (2018)

Advanced Geonetwork – Code Customization (2019)

Advanced Geoserver – Cluster and Load Balancing over Docker (2019)

PGRouting (2018)

Educación IT

Java Essentials (2010)

PHP Web Services (2011)

High School - ET N° 28 REPUBLICA FRANCES

Technical degree in electronics 1994 - 1999

Work Experience

Sr Developer Aeroterra

November 2022 – Present

Currently leading development for multiple high-impact GIS-Integration projects utilizing **Python, React, and TypeScript**, while leveraging advanced low-code and data streaming tools (GeoEvent, AGOL DataPipelines) for real-time processing.

These are some remarkable projects which involved Data Pipeline optimization, Apache Kafka-like tools or XLSForm templates:

1. Real-Time Electric Network Dashboard: Engineered a comprehensive monitoring system leveraging GeoEvent to integrate SCADA data, providing live visibility and control over electric network operations.
2. Linear-to-Spatial Progress Tracker: Developed a GIS-integrated web app that bridges standard platform data with custom visualizations. Using Python-based ingestion scripts and optimized PostgreSQL views, the solution automates the conversion of linear measures into spatial coordinates for real-time monitoring of 7 concurrent construction phases.

3. Disaster Response Coordination System: Designed and deployed a real-time dashboard for emergency management, utilizing Survey123 (XLSForm) for rapid mobile data collection and centralized decision-making.

Sr. Developer - SpaceSUR

March 2022 – May 2022

I took this position as Sr. developer for a 3 months trial period, eventually they realized they needed someone with more experience in design patterns and decided not to renew my contract.

In this brief period I had the opportunity to:

1. Analyze customer databases to be redesign into a GeoPortal
2. Assist geographer personal in finding geodata issues and solve them using SQL
3. Create a django view to allow GeoNode layer uploads from external applications (using binary files request instead of multipart/form-data requests)
4. Solve GeoNode async request related issues while saving maps containing remote WMS services

Technical Lead / Developer Sr/ SIG Consultant at SSPPBE - GCBA (Buenos Aires City government)

April 2020 - December 2021

I started as a Developer Ssr. and began to assume a Sr. role slowly, getting involved in models design, code revision and helping pushing forward halted processes in pair coding sessions.

Some highlight projects are:

1. Back-end design (API-Taxi powered by Django + Postgres + PostGIS)
<https://ruteo.usig.buenosaires.gob.ar/pie/viaroute?loc=-34.4873995,-58.684607&loc=-34.5009963,-58.6760981&instructions=true>
2. Debug and Expand functionalities API Cadastral Data (Python + Django)
<https://epok.buenosaires.gob.ar/catastro/>
3. Functionality updates API 3D-City (Python + Django) <https://ciudad3d.buenosaires.gob.ar>
4. Back-end update (Geographic Database Engine powered by Django + Postgres + PostGIS)
https://epok.buenosaires.gob.ar/pub/mapa/mapaescolar/establecimientos_educativos/
5. Implementation and Maintenance Vector Tile Server (Python + sqlite)
6. Documentation and Tutorial reviews
7. Docker images creation from scratch or update existing ones
8. File uploads and metadata updates automation to Open Data Portal (python + CKAN)
9. Geospatial Data analysis (PostGIS + QGIS, adress normalization, 3D-City data visualization)
10. Process normalization (Map of crime) <https://mapa.seguridadciudad.gob.ar/>

Developer / Freelance Consultant

March 2015 - March 2020

I worked independently for a few years in challenging and innovating projects.

Some remarkable companies and/or institutions I had the opportunity to work include:

- National Institute of Geography (Branch of Defense department)
- ScanTerra S.A. (Geographic data analysis for Agriculture)

Some highlight projects I had participated on:

- 1 Map servers: Installation, monitoring and maintenance of map servers and georeferenced data under **Geoserver** technology. Implementation in diverse ecosystems such as **Docker**, **JAVA** Servlet under **Apache Tomcat** or compiled **Jetty** environment.

- 2 Interactive Maps: Interactive map development for elementary and high school students usage. It allows students to perform measures, draw lines and write notations on blank maps to be saved as PDF files or printed on paper. <http://mapasescolares.ign.gob.ar/>
- 3 Geographic Data Publication: Geonode Installation, migration and maintenance. <http://qhapaqnan.ign.gob.ar/>
- 4 Rancher (Docker orchestration) The challenge was to discover every micro-service of a complete and vast stack to achieve 3 separate tasks:
 - Identify both github and dockerhub repositories for each stack component.
 - Identify every technology integrated in the system and define which technical profiles where required for the next development stages.
 - Write and expand documentation for every micro-service and pipeline.
- 5 Processes analysis: Deployment process analysis to increase stability and reliability, accommodate backup instances, rollbacks and other desired improvements.
- 6 Web Page data capture: Data capture automation using Selenium + Python technologies, it extracts data which only can be retrieved by navigating a web page. Tasks include
 - user authentication
 - menu navigation,
 - file downloads and migrate data from downloaded files into a database.
- 7 Geoserver / Geonode instalation and fine tuning for heavy load.
 - <http://wms.ign.gob.ar>
 - <http://qhapaqnan.ign.gob.ar>
- 8 Joomla! / Drupal components adaptation.

Devops at TSOFT (for TELECOM S.A.)

October 2014 - February 2015 (5 months)

- 1 SeleniumHQ/ Javascript / Bash / SOAPUI developer with assertions-driven regression detection
- 2 Jenkins administration and unit test configuration
- 3 Gantt design and monitoring for QA environments assembly
- 4 Coordination between various Software Factories, deployment areas and QA teams.
- 5 Linux user creation, disk monitoring, bash scripting
- 6 Cross applications messaging coordination
- 7 Infrastructure delivery coordination

Developer Jr at 4IT (for Banking client)

December 2012 - August 2014 (21 Months)

1. ETLs scripting
2. MySQL administration
3. MySQL stored procedures and data modeling
4. Banking data analysis, product results vs global results
5. Web application design, html + jQuery + bootstrap

Developer at TECENG GAMING

December 2011 - November 2012 (12 Months)

1. Data migration between SQL databases
2. Database administration, data validation
3. User Manual and Administrator Manual manufacture
4. Data analysis using PostgreSQL

Developer Jr and Help Desk at TECENG GAMING

March 2010 - December 2011 (22 Months)

Bash Scripting
User support
PostgreSQL Database administration
Data analysis
User support

Processes analysis at Arwen

March 2003 - January 2010 (83 Months)

Processes automation
Visual Basic developer
MS-Excel support

Support at Tecnet S.A.

March 2001 - February 2003 (22 Months)

MS-Windows Help Desk
Lotus Notes Help Desk

Help Desk at Wober y Asoc.

March 1999 - April 2001 (26 Months)

1. Help Desk
2. Computer and Printers repair
3. Network wires installation

Gonzalo Varela

Gis Developer | Technical Lead

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3 personas han recomendado a Gonzalo

"Recomiendo a Gonzalo Varela por ser una persona capaz en el sentido Laboral y Humano, ya que se integra de manera muy rápida al grupo y posee facilidad de aprendizaje, es un muy buen trabajador."

— **Alfredo Cabezas**, *Técnico, Tecnet*, ha trabajado directamente con Gonzalo en Tecnet S.A..

"Gonzalo es un excelente profesional y correcta persona, tuve la suerte de trabajar con él en distintos proyectos. Maneja muy bien las relaciones interpersonales adaptándose muy bien a los distintos grupos de trabajo, tiene facilidad para el aprendizaje."

— **Bruno J. Bosco** *Tmanager IT ISSUING PROCESSING* supervisó a Gonzalo en 4IT..

"Es un gusto trabajar con Gonzalo. Se ha hecho cargo de la coordinación técnica del equipo de desarrollo de Ingeniería de Datos con mucha idoneidad, no sólo desde su conocimiento de las tecnologías y de las soluciones que desarrolla y mantiene el área, sino también desde el abordaje humano del equipo. Es un equipo que ha encarado procesos complejos de implementaciones, de resolución de incidentes y de desarrollo de soluciones en medio de una transición de referentes y bajo gran presión, y Gonzalo ha sabido aportar claridad, eficacia y buena coordinación de los colaboradores. Confío plenamente en su criterio técnico, y me da gusto compartir el día a día de trabajo con él."

— **Rocío Marcalain**, *Directora General de Arquitectura de Datos*, ha ocupado Gonzalo en Tecnet S.A..