Voughn Emil Calma

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Data and automation engineer for a 40-person geospatial department (Senior GIS Specialist II). Built and runs the weekly ingestion, consolidation, validation and reporting pipeline the team depends on, cutting turnaround from more than a day to about 15 minutes against a fixed next-day deadline, plus the Python, Power Query, VBA and SQL tools behind it, used by more than 90 people a day. Strongest at keeping recurring jobs running, tracing data discrepancies to their root cause, reconciling records across source systems and automating away manual effort.

Core Competencies

- **Data Operations & Production Support**: recurring pipelines and management reports delivered on a hard weekly deadline; troubleshooting failed runs; versioned releases of tools in daily use
- **Data Quality, Reconciliation & Root Cause**: automated checks with exception reports, before/after change audits, and reconciliation of field reports against master databases
- **ETL & Process Automation**: Excel Power Query (M), VBA, Python (pandas, NumPy, GDAL/OGR), QGIS Processing models
- **SQL & Relational Data**: SQL on SQLite, GeoPackage and Cloudflare D1, including an approval workflow with a full audit changelog; JavaScript web apps on Cloudflare Workers and Pages
- **Tools & AI-Assisted Development**: Claude Code (primary), Excel, Power Apps, QGIS, Google Earth, GitHub Actions, MS Office, Google Workspace

Professional Experience

- **Countryside Investments Holdings Corp. (formerly Solar Philippines)** **Makati City, Philippines (hybrid)**
  Senior GIS Specialist II *Nov 2020 - Present*
  Promoted twice: Junior GIS Specialist (Nov 2020 - May 2023), Senior GIS Specialist (Jun 2023 - May 2026), Senior GIS Specialist II (Jun 2026 - Present). Geospatial Data and Survey Department.
  - Automated the weekly reporting cycle end to end (ingestion of per-municipality source databases, consolidation into the project database, validation, map production and KMZ output), cutting turnaround from more than a day to about 15 minutes against a hard Wednesday-start, 10 AM next-day deadline.
  - Built an Excel Power Query (M) pipeline that locates and loads source databases from a configured folder (skipping lock files), combines them, joins them to tranche, conversion and reclassification reference data, flags consolidation status, and normalises dates and currency.
  - Built a VBA automation library, packaged as add-ins, that replaced manual database builds, table refreshes and summary pivots, and runs automated data-quality checks on dates, payment terms and owner values that output an exception report for correction before data reaches reports.
  - Built a 12-algorithm PyQGIS Processing toolbox, including GeoPackage change detection that logs every changed field with its old and new value for audit, and a data-source swap across GeoPackage, Shapefile, GeoJSON and CSV.
  - Validate land databases for 6 land acquisition and right-of-way projects against ground reports and stakeholder progress updates, and turn them into the recurring data summary reports management uses to track progress.
  - Built four QGIS report-processing models that turn a municipality's raw mobile field-report exports (KMZ) into one analysis-ready layer: merging reports, parsing embedded attributes, consolidating negotiators and flagged issues into single fields, standardising negotiation dates, and spatially joining each report to its lot and barangay. The two most used cut a 30–60 minute manual process to about 20 seconds, each run daily by the department's 30 junior specialists.
  - Develop and maintain a Python QGIS plugin (now at v13.2) that exports layers as structured KML/KMZ from CSV rule files, cutting processing time by about 90% for the whole 40-person department.
  - Built a QGIS Processing model that produces all 30 maps per project site (11 map types) in one run, and

parameterised models that compute per-lot affected area along route corridors for acquisition and compensation planning.
- Generated 131 location-specific mobile data-collection templates across 14 provinces in one run with a Python tool (pandas, sqlite3).
- Built and deployed a team scheduling and leave-tracking web app (JavaScript, Cloudflare Worker, GitHub Actions) used by the whole 40-person department.
- Across these tools: more than 500 man-hours saved per month and more than 90 active daily users. Supervise 3 Junior GIS Specialists and have trained 12 in total.

- **Community organisation (confidential)** **Remote**
  Independent Volunteer, Community Data Platform *May 2026 - Aug 2026*
  - Built, with Claude Code, a report submission web app with admin review and diff views, where approved changes are written to a Cloudflare D1 (SQL) database with a full before/after audit changelog (Cloudflare Pages Functions, JavaScript, Python sync and export scripts).
  - Built a companion web map dashboard fed by a Python data pipeline that cleans multi-municipality data and joins it to administrative boundaries.

- **Environmental consultancy client** **Remote**
  Independent GIS & Remote Sensing Consultant *Jun 2026 - Aug 2026*
  - Built a drone-imagery analysis toolbox in Python and QGIS (NumPy, GDAL, SciPy, scikit-learn), including Random Forest land-cover classification on an engineered 11-feature stack and bare-land detection auto-calibrated by IoU grid search against ground-truth samples, with calibrated parameters saved for reuse.
  - Added per-square-metre vegetation grid analysis with dual-sample percentile calibration, and boundary refinement that snaps rough polygons to spectral edges.

Education

- **University of the Philippines Diliman, College of Science** **Quezon City, Philippines**
  BS Geology *2015-2020*

Languages

- English (native), Filipino (native).

References

- Available upon request.