MAHARDI SETYOSO PRATOMO

Geospatial Solutions Architect / Engineer

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PROFESSIONAL SUMMARY

Geospatial solutions professional who turns location-related business problems (revenue leakage, misallocated capital, uneven map coverage, partner data-sharing constraints) into solutions that stakeholders actually adopt. 8+ years at Grab bridging Product, Engineering, Partnerships, and country operations across Indonesia, Thailand, and Myanmar, preceded by geospatial presales for imagery, mapping, and surveying solutions. Works from discovery and business case through solution design, partner and vendor alignment, rollout, and adoption, with trade-offs and costs documented. Technical depth in spatial data and cloud (PostGIS, H3, BigQuery, dbt, Terraform); building AWS depth through AWS re/Start (2026).

Core competencies: business process redesign · requirements discovery · business case and cost-benefit analysis · solution design and trade-off analysis · partner and vendor evaluation · stakeholder alignment and adoption · technical proposals and executive summaries · proof of concept

PROFESSIONAL EXPERIENCE

Grab Holdings | Jakarta, Indonesia | Mar 2018 – Jun 2026

Senior Geospatial and IoT Product Operations | Mar 2018 – Jun 2026 (promoted to Senior in Apr 2023)

Bridged Product, Engineering, Partnerships, and country operations for GrabMaps and IoT programs, turning business problems into data models, workflows, and partner solutions. Led a team of up to 10 across five concurrent programs and owned USD 200K+ in program budget.

Strategizing capital allocation for IoT FoodLocker rollout

- Problem: blanket rollout risked placing lockers where demand could not justify building-management fees.
- Built a site-qualification analysis (per-building geofence, booking history, GMV, user age profile, merchant density within 100–200 m) with a ~200-booking go/no-go threshold, which the budget owner and Partnerships used to approve, hold, or reject each site against its rental cost. Result: 200+ sites live at above 90% utilization, cutting driver action time by 25–40%.

Reducing revenue leakage by 70–80% by fixing service-boundary data

- Problem: blank spots between cities left demand unserved, and overlapping zones with conflicting service configurations caused in-app allocation bugs.
- Reframed it as a data-governance issue: defined a GeoJSON standard aligned to the Badan Informasi Geospasial hierarchy and a repair-and-reingest process with Engineering under read-only backend access. Result: blank-spot gaps and dual-configuration bugs removed, and revenue metrics aligned to official administrative zones.

Pitching partner data-sharing to launch Indoor Navigation services

- Pitched indoor-navigation partnerships to 15+ mall operators and Angkasa Pura (Jakarta and Bali airports). When the airport objected to sharing security-sensitive floor plans, renegotiated scope to public areas to keep the deal alive.
- Result: 20 indoor navigation sites launched, with UAT and operating procedures owned end to end.

Solution strategy: street-imagery coverage program on driver-mounted 360° cameras

- Problem: 100+ cameras on 70+ drivers had to cover 30+ cities, with no basis for deciding where collection would add the most map value.
- Starting from only cancelled-booking and geohash data, developed the prioritization and allocation rundown (coverage gap, cancellations, POI gap, new-service demand per geohash), defined completion as unique km collected over total unique km across 12 OSM road classes, and documented the rationale and justification for document review and budget approval. Handled field constraints: access letters for private roads, military and airport exclusions, camera-repair escalation.
- Result: 400K+ unique km collected across 2024–2025.

Solution design: self-service geospatial data extraction for business teams, improving operations by up to 90%+

- Problem: every geohash schema request queued behind the GIS team for about two days, slowing service-area launches.
- Redesigned the process in three stages (manual → script → self-serve web app). Result: requests answered in 3–5 minutes by the requesting teams themselves; placed 5th of 10 finalists at an internal Product Ops hackathon, presenting to a panel that included the Chief Product Officer and the heads of Product, Engineering, and Geo Business.

Program vendor selection and budget trade-offs

- Evaluated and selected vendor proposals across manpower, telco, logistics, and camera hardware, allocating budget through cost-versus-coverage trade-offs.

EARLIER CAREER: GEOSPATIAL PRESALES AND PUBLIC-SECTOR GIS

Datascrip | Business Executive, Geospatial & Surveying | Jakarta | Nov 2016 – Sep 2017

- Carried an annual sales target of IDR 2.5B for survey and geospatial instruments across construction, plantation and forestry, mining, and education clients.
- Built pipeline for GNSS, total station, digital theodolite, and FARO laser-scanning solutions through canvassing, cold calling, client visits, and showroom walk-ins.
- Delivered first presentations and hands-on product demonstrations to qualified prospects (four progressed to demo), matching configurations to their survey requirements with principals and channel partners.
- Closed a 10-unit theodolite deal (IDR 70M).

KLHK (Ministry of Environment and Forestry) | Geospatial Analyst | Jakarta | Jan 2016 – Sep 2016

- Reconciled forestry spatial data from 27 provincial forestry offices into one national dataset for the PIPPIB forest-moratorium map, resolving conflicting schemas, boundary versions, and attribute conventions through direct coordination with each office.
- Output adopted as a cross-ministry reference for land-use governance.

Earthline | GIS Assistant → Sales & Business Support | Jakarta | Aug 2014 – Oct 2015

- Moved from mapping operations to the sales support team after three months; prepared technical proposals and area-of-interest (AOI) calculations for 15+ satellite-imagery and mapping quotations valued IDR 300M–1B, about 90% of which closed, for agribusiness and energy clients including Sinarmas, Wilmar, and Pertamina.
- Built product knowledge across DigitalGlobe and Pléiades imagery, drone photography, and mapping services; recommended product configurations for familiar accounts, subject to management approval.
- Repaired mis-projected client AOI files before quotation, turning unusable boundaries into accurate area figures and proposal documents.

SOLUTION DESIGN PORTFOLIO

NYC Taxi Supply-Demand Gap Analysis | Live dashboard | GitHub

- Designed and deployed a seven-component system (Cloud Storage → Dataproc/PySpark → BigQuery → dbt → PostGIS → Kestra orchestration → Streamlit), provisioned with Terraform and service-account-scoped IAM.
- Processed 35M+ validated trips across 185 zones to locate unmet demand, and stated the supply-proxy limitation explicitly rather than hiding it.
- Tested and rejected the road-infrastructure hypothesis with PostGIS joins over 72,005 OpenStreetMap segments, showing dispatch and positioning, not physical access, as the bottleneck.
- Documented 56 architecture decisions with trade-offs and rejected alternatives.

Geohash Schema Automation Extractor | Live app

- Production Python and Streamlit tool, still live, that lets non-GIS teams extract geohash schemas from map polygons without GIS software.

SKILLS

- **Architecture and discovery:** requirements discovery, solution design, trade-off analysis (ADR), C4 diagrams, non-functional requirements, technical proposals, executive summaries, proof of concept
- **Cloud and data:** Google Cloud (BigQuery, Cloud Storage, Dataproc), Terraform, Docker, dbt, PySpark, Kestra, Trino/Presto, Hive, Databricks (notebooks and scheduling), SQL, Python
- **Geospatial:** PostGIS, spatial SQL, H3, Geohash, GeoPandas, Shapely, QGIS, ArcGIS (map production), OpenStreetMap, GeoJSON, GeoParquet, georeferencing, CRS management
- **Commercial and delivery:** vendor evaluation, budget ownership (USD 200K+), stakeholder management, enablement and training
- **Languages:** Bahasa Indonesia (native), English (professional working)

CERTIFICATIONS

Certified Associate in Project Management (CAPM), Project Management Institute, May 2023

TRAINING

- AWS re/Start Cloud Computing Program, Orbit Future Academy, Nov–Dec 2026 (in progress)
- AWS Cloud Practitioner Essentials, AWS Training & Certification, Oct 2026
- Belajar Dasar Cloud dan Gen AI di AWS, Dicoding, Oct 2026
- Spec-Driven Development dengan Kiro, Dicoding, Sep 2026

EDUCATION

Universitas Gadjah Mada (UGM), B.Sc. Geographic Information Science (Minor: Statistics and Programming)