THEODORE E. PADILLA

GIS Specialist | Geologist
Quezon City, Metro Manila, Philippines 1101

Experience

Project Junior GIS Specialist
DOST-PHIVOLCS – Quezon City, Metro Manila
August 2025 – Present
- Create Python scripts of GIS models for centralized web platform
  - Automation and open-source integration of geospatial processes
  - Service area analysis, suitability analysis and risk calculation
- Provide geospatial consultations and solutions for various DOST agencies
- Participate in program-wide trainings on AI and web integrations: containerization, RAG, AWS

Project Science Research Specialist I
DOST-PHIVOLCS – Quezon City, Metro Manila
March 2024 – August 2025
- Cleanse and manage local attribute and topology data
- Conduct suitability analysis for earthquake evacuation open spaces
- Create ArcGIS web maps, applications and dashboards
- Conduct lectures on exposure data mapping for various NGAs and LGUs
- Draft technical reports, work instructions and presentations

Project Science Research Assistant
DOST-PHIVOLCS – Quezon City, Metro Manila
November 2023 – March 2024
- Created provincial and municipal-scale hazard map series
- Performed RS and GIS analyses and provide maps and reports for earthquake-induced landslides
- Generated ash dispersion and trajectory models
- Drafted relevant work instructions

Junior Geologist
Teragrail Geology and Geotechnics – Imus City, Cavite
May 2023 – October 2023
- Supervised a borehole drilling operation for geotechnical investigation
- Processed aerial survey data in Agisoft Metashape
- Conducted geohazard assessments and drafted corresponding Engineering, Geological and Geohazard Reports
- Created geohazard map layouts in ArcGIS and QGIS
- Plotted consolidation and topographic plans in AutoCAD

Education

**Double Degree in Bachelor of Science in Geology
and Geological Science and Engineering**
Mapúa University, Intramuros, Manila
July 2015 – July 2022
- Top 10 Academic Performer of Bachelor of Science in Geological Science and Engineering – Batch 2015 (2016)
- Member, Association of Geologists and Geological Engineers of Mapúa

Research Works

Suitability Assessment of GIS-generated Safe Open Spaces for Earthquakes in Iloilo City: A Case Study
Mercado, N.J.L., Tatlonghari, C.R.A., Gomez, G.V.V.T., Padilla, T.E., Palma, J.A., Almoneda, K.C.A., Tabuzo, J.H.B., Cahulogan, M.T.
Research Poster
GeoCon 2024

Shake to Slide: Analysis of the Landslides Triggered by the 17 November 2023 M$_W$ 6.8 Offshore Davao Occidental Earthquake
Fermo, D.G.S., Daag, A.S., Dizon, M.P., De Leon, R.J.B., Pagbilao, V.T.M., Dipatuan, J.M., Baltazar, H.M.M., Buhay, D.J.L., Pidlaoan, A.C., Padilla, T.E.
Research Poster
GeoCon 2024

Flood Risk Assessment and Dam Breach Analysis of Magat Dam Using HEC-RAS and LU/LC Data: A Multiple Criteria Analysis
Basan, A.H.G., Padilla, T.E., De la Peña, F.
Undergraduate Thesis
2022

Licenses

Geologist
Professional Regulation Commission
February 2023 – June 2026

Relevant Skills

Technical Skills
- ArcGIS Pro, ArcMap and QGIS – map series layout, topology checking and data cleansing, ModelBuilder, suitability analysis, road network analysis
- Python – GeoPandas, Shapely, Rasterio, GDAL, NetworkX, ArcPy
- Remote Sensing – land cover change detection, image classification
- Photogrammetry – Agisoft Metashape
- Database management – data cleansing, pivot tables, automation
- HEC-RAS and HEC-HMS – dam breach modelling, flood modelling
- AutoCAD – parcel consolidation plans, topographic plans
- Technical Writing – technical reports, web articles, research poster, technical presentation

Soft Skills
- Technical communication – lectured on earthquake and volcanic hazards, database management, QGIS and ArcGIS data conversion and projection for LGUs and NGAs
- Mentoring and training – trained LGU and NGA staff and trainers on GeoRiskPH Platform
- Leadership and management – supervised geotechnical drilling operations
- Coordination and facilitation – coordinated with LGUs and clients for fieldwork and training cooperation

References

Gilson Andre Narciso
Geospatial Python Developer
Datafarming, Inc.
(Contact details provided upon request)

Shania Bagaforo
GIS Analyst
MasTec Communications Group
(Contact details provided upon request)