

ALEX TOUR-SARKISSIAN

GIS ANALYST • ENTERPRISE GIS • TRANSPORTATION NETWORKS • SPATIAL DATABASES

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SUMMARY

GIS analyst with seven years building spatial databases, transportation-network workflows, and decision-support systems across infrastructure, international development, conservation, and government research. Completed and validated Version 1.0.0 of a San Francisco Enterprise Transportation Routing System using PostgreSQL, PostGIS, pgRouting, SQL, and QGIS. Experienced structuring incomplete datasets and reconstructing data that doesn't exist in clean form — from hand-digitized infrastructure corridors in geopolitically restricted regions to validated road-network data at terabyte scale. Designs reproducible GIS workflows and translates spatial analysis into maps, dashboards, documentation, and decision-ready outputs, bringing Esri platform depth, Python automation, Google Earth Engine, and AI-augmented GIS to teams that need geospatial intelligence they can trust.

EXPERIENCE

GIS Analyst (Independent & Project-Based)

September 2024 – Present

San Francisco, CA

- Completed and validated Version 1.0.0 of a database-first Enterprise Transportation Routing System for San Francisco using PostgreSQL, PostGIS, pgRouting, SQL, and QGIS; built a routable network of 16,081 edges, 9,644 vertices, and 1,246.64 roadway miles, and implemented emergency response routing, nearest-facility accessibility, service-coverage analysis, and infrastructure inspection optimization.
- Built the release through a numbered SQL workflow with automated database, geometry, CRS, network, and routing tests, backup/restore validation, and release acceptance testing; delivered decision-support maps, QGIS resources, technical documentation, and an executive presentation.
- Built five AI-powered spatial accessibility systems as part of LLM Agentic GeoAI Mastery certification — School Accessibility (Portland), Weather Vulnerability (Bristol), Multi-Hazard Response (Tokyo), Healthcare Accessibility (São Paulo), and Urban Accessibility — applying agentic Python workflows and OpenStreetMap datasets to real-world spatial problems across four cities on three continents.
- Completed a six-project climate vulnerability visualization portfolio using Google Earth Engine, remote sensing, and raster analysis across California, Louisiana, Florida, and Rocky Mountain National Park; version-controlled via GitHub.

Web GIS Analyst / Technical Support Specialist | [Building Education](#)

September 2021 – Present

San Francisco, CA (Remote)

- Designed ArcGIS Experience Builder dashboard visualizing 7 school construction sites across Nepal — architected for two distinct donor audiences simultaneously: data-driven (construction status, funding progress, classroom counts, student reach, project timelines) and emotionally-driven (photography, narrative context, pop-up panels with community stories). Dashboard is the centerpiece of the organization's upcoming website overhaul.
- Stepped into solo event leadership for a 50–100 attendee fundraiser — managing logistics, volunteer coordination, and delivery schedules when the primary coordinator was unavailable — and met the \$50,000–\$60,000 fundraising target.
- Provides WordPress technical support and content management for 6–10 staff across 7+ iterations of the site; taught himself HTML/CSS and AI-generated code to implement custom responsive sponsor hover boxes (logos, descriptions, social links) without breaking existing templates.

GIS Mapping Specialist | [Armenian Virtual College](#)

January 2021 – August 2022

Remote

- Delivered 20-map thematic series across 6 countries (Russia, Turkey, Georgia, Armenia, Iran, Azerbaijan) supporting a U.S.-sponsored training program that reached 100+ participants in government, academia, and think tanks — integrating ~30 geospatial datasets.
- Reconstructed datasets that did not exist publicly: sourced regional maps and non-GIS materials, georeferenced them in ArcGIS Pro, and hand-digitized pipeline corridors, ethnic boundaries, and transportation networks feature by feature against basemaps. Three maps covering sensitive infrastructure corridors remain restricted.
- Adapted Python scripts within ArcGIS Pro to extract and display road network data across the multi-country series — ensuring consistent visualization and saving ~1 hour per map (20 hours total).
- Most technically complex work: six-map Caucasus demographic series requiring extensive spatial validation and manual boundary correction where ethnic group shapefiles were inconsistent or missing across countries.

GIS Technician | [Apple \(via Apex Systems\)](#)

March – April 2020

Sunnyvale, CA

- Reviewed 1,000+ road network records per day — validating connectivity, speed limits, and turn restrictions within terabyte-scale Apple Maps geospatial datasets using Apple's proprietary internal mapping platform.
- Used an internal geospatial editing platform to view road networks alongside imagery, review flagged records, edit navigation attributes, and submit validated changes through a structured QA workflow.

GIS Analyst | [DoD-Affiliated Research \(Contract\)](#)

July 2018 – August 2019

Remote

- Produced 4 rapid-turnaround analytical GIS maps over 13 months supporting internal government research — covering Afghanistan mineral resource distribution, Belt and Road Initiative infrastructure corridors, and regional transportation networks.
- Integrated Belt and Road infrastructure dataset into ArcGIS environment; analyzed spatial relationships between infrastructure corridors, transportation networks, and regional geography to deliver decision-support products for government planning and research.

GIS Technician | [Felidae Conservation Fund](#)

June 2018 – February 2019

Marin County, CA (Remote)

- Mapped ~100 camera trap locations and scat observations for puma and bobcat across 520 sq mi of Marin County habitat (Muir Woods, Mount Tamalpais, Tennessee Valley, Rodeo Valley) using data spanning 2012–2018.
- Produced 2 maps reviewed with the research team — a camera trap and scat observation map and a regional tracking map — giving researchers spatial context to interpret movement corridors, observation clusters, and monitoring coverage gaps.

Data & Events Coordinator | [Sunday Streets San Francisco](#)

June – August 2017

San Francisco, CA

- Maintained Salesforce CRM tracking participants and organizations across public events; managed data entry and recordkeeping for community engagement outreach. Designed event flyers using Adobe Photoshop and Illustrator.

SKILLS

Enterprise GIS & Databases	PostgreSQL, PostGIS, SQL, pgRouting, Spatial Databases, Geodatabases, Data QA/QC, Backup & Restore Validation
Transportation & Spatial Analysis	Network Analysis, Transportation GIS, Routing, Accessibility Analysis, Spatial Analysis, Infrastructure Analysis, Cartography
GIS Platforms	QGIS, ArcGIS Pro, ArcGIS Online, Experience Builder, Dashboards, Survey123, ArcGIS API for Python
Automation & Remote Sensing	Python, ArcPy, Jupyter Notebooks, Google Earth Engine, Raster Analysis, Remote Sensing, GeoAI, GitHub
Web GIS & Data	WordPress, Salesforce, Adobe Creative Suite, Microsoft Office, Spatial Data Formats

FEATURED PROJECTS

Enterprise Transportation Routing System — Version 1.0.0 — PostgreSQL / PostGIS / pgRouting / QGIS, 2026

Completed and validated database-first enterprise GIS routing platform for San Francisco modeling 16,081 routable edges, 9,644 vertices, and 1,246.64 roadway miles. Implemented emergency response routing, nearest-facility accessibility, service coverage, and infrastructure inspection optimization through a numbered SQL build workflow with automated QA/QC, release testing, and backup/restore validation.

Climate Vulnerability Visualization — United States — Google Earth Engine, 2026

Completed six-project environmental GIS portfolio analyzing climate and environmental vulnerability across California, Louisiana, Florida, and Rocky Mountain National Park using Google Earth Engine, remote sensing, and raster analysis. Produced reproducible scripts, GeoTIFF exports, CSV summaries, technical documentation, and GitHub-managed workflows.

Electoral Systems Global Dashboard — ProRep Coalition, 2025

Interactive global map classifying electoral systems for 190+ countries. Each country verified against 5–6 independent sources before data was structured in Excel, joined to country shapefiles in ArcGIS, and published as a live ArcGIS Online dashboard — built for policymaker accuracy, not just visualization.

School Construction Projects Dashboard — Building Education, 2025

Dual-audience ArcGIS Experience Builder dashboard for 7 Nepal school sites (5 complete, 1 in progress, 1 planned) — simultaneously serving data-driven donors (construction status, funding, timelines) and emotionally-driven donors (photography, narrative pop-ups). Designed as a scalable living dataset.

Armenia & Caucasus Thematic Map Series — Armenian Virtual College, 2021–22

20-map series across 6 countries integrating ~30 datasets. Includes hand-digitized infrastructure and demographic data reconstructed from imagery and non-GIS sources where public datasets did not exist. Highlighted by six-map Caucasus ethnic demographics series requiring manual boundary validation across all six countries.

Five GeoAI Spatial Accessibility Systems — Certification Capstone, 2026

Five AI-augmented spatial systems built with Python, Jupyter Notebooks, and OpenStreetMap data across Portland, Bristol, Tokyo, São Paulo: school accessibility analysis, weather vulnerability assessment, multi-hazard emergency response, healthcare accessibility scoring, and urban accessibility gap analysis.

EDUCATION

Bachelor of Arts, Geography | GIS Certificate

California State University, East Bay · December 2018

CERTIFICATIONS

GIS for Climate Action — Esri, March 2026

LLM Agentic GeoAI Mastery: Build Autonomous GIS Systems — Udemy, February 2026

Content Management with the ArcGIS Online API for Python — Udemy, January 2026

PROFESSIONAL ORGANIZATIONS

CA Geospatial Professional Network (CalGPN) | Member, 2024 – Present · GIS conferences, professional development, Bay Area geospatial community

BayGeo | Member, 2020 – Present · Monthly Bay Area geospatial professional networking and industry lectures

Toastmasters International | Member, 2023 – Present · Public speaking and professional communication development

Kiwanis International | Member, 2020 – Present · Community service and fundraising; Circle K International member since college