

John Ehlen

Cloud GIS Platforms | DevOps & Systems Orchestration | Data Engineering | Applied AI

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SUMMARY

GIS and systems practitioner who has taught as well as built: designed and taught an Introduction to GIS course as adjunct faculty, gave 7 conference talks, co-founded a transportation data user group and served on NENA, WZDx and AGIC 9-1-1 groups. Runs the cloud GIS behind the Los Angeles film permit process and builds AI and orchestration tooling around it; earlier managed NG911 data across 8,000+ square miles and led the statewide NG911 address validation platform.

SKILLS

Cloud & infrastructure: Google Cloud (Compute Engine, gcloud CLI), Ubuntu Linux, Windows Server, Docker and Docker Compose, infrastructure as code (Chef/Cinc), Jenkins CI/CD, Git and GitHub, Datadog observability, Apache JMeter, Bash, PowerShell

Data: PostgreSQL (PostGIS, pgvector), SQL Server, BigQuery, Redis, MinIO, Hevo, FME Desktop and Server, SSIS, ETL and data validation

Development: Python (ArcPy, FastAPI), TypeScript, React, Node.js, Vite, C#/.NET, REST APIs, Playwright

GIS: ArcGIS Enterprise 11.x, Portal and Server, ArcGIS Online, Experience Builder, ArcGIS Maps SDK for JavaScript, ArcGIS Pro, Arcade, QGIS, SDE geodatabases, Roads & Highways (LRS), NENA NG911

Applied AI: Self-hosted LLM and vision models (llama.cpp, SigLIP 2, Whisper), Claude Code, MCP, agentic coding workflows

Delivery & BI: Jira, IT change management, runbooks, Tableau, Power BI, Looker Studio

EXPERIENCE

FilmLA · Business Systems Specialist, GIS · Hollywood, CA (remote)

Jun 2022 – Present

Lead engineer and administrator for the GIS platform behind the film permit process: 100+ map and feature services and 150+ feature classes across dev, test and prod, with work tracked in Jira.

- Led the migration of a legacy ArcGIS Enterprise deployment from on-premises servers to Google Cloud, with dev, test and prod built as code in Chef/Cinc, then rightsized it to cut hosting spend by \$30,000 a year.
- Ran the 10.9.1 to 11.3 upgrade, backed by JMeter load testing and 8 runbooks, revalidating ~10 apps and widgets.
- Replaced manual SSH deployments and console commands with Jenkins one-button deploy and rollback across dev, test and prod, and put patching and releases under IT change management.
- Set up Datadog for infrastructure visibility and PostgreSQL query metrics, and used them to tune slow queries.
- Engineered Hevo and BigQuery pipelines moving ~2 million events a month, plus custom spatial connectors: nightly incremental PostgreSQL-to-BigQuery loads with reprojection and a full-rebuild path.
- Rebuilt a 2009-era location-scouting platform on TypeScript/React, FastAPI, PostgreSQL with PostGIS and pgvector, Redis and Docker Compose, with self-hosted vision models auto-tagging ~40,000 photos across 802 locations.
- Shipped web apps on the ArcGIS Maps SDK for JavaScript and Experience Builder, including a jurisdiction boundary editor whose SQL triggers keep permit lookups current, and a React/Node notification tool backed by BigQuery.
- Prototyped an agentic coding workflow (Claude Code, MCP) that takes support tickets to reviewed pull requests, with human approval before every release.

Works Consulting · Senior Analyst / Consultant · Gilbert, AZ (remote, part time)

Jun 2022 – 2026

- Developed HPMS data for a highway agency's federal reporting and supported junction model building for transportation clients.
- Administered ArcGIS Portal and SDE geodatabases, wrote proposals and mentored staff.

Gistic Research, Inc. · **GIS Project Manager** · Tempe, AZ (remote)

Feb 2021 – Jun 2022

- Project manager for statewide programs on two fronts: a multi-million-dollar contract with ADOT's Multimodal Planning Division spanning every ADOT dataset, including critical infrastructure data, and NG911 data work for all of Arizona's counties.
- Ran state and county road data QC covering every county in Arizona: gaps, overlaps, duplicates, short events, monotonicity, cardinality and domain checks, automated in FME against Roads & Highways (LRS).
- As project manager, led delivery of 5 statewide executive dashboards (HPMS, structures, highway log, LRS QC, pavement), including moving the pavement one from Tableau to ArcGIS Online, and republished the State Highway System logs after an 8-year gap.
- Led development of the Arizona 9-1-1 Program Office's statewide NG911 address validation platform: built the Python tool that runs it in ArcGIS Pro and a C#/.NET ArcGIS Pro add-in, helped train its NLP address-parsing models, and provided recurring training and one-on-one support.
- Automated statewide NG911 data aggregation for Arizona DPS with FME and Python.
- Wrote bids and proposals for state transportation geospatial programs.

Embry-Riddle Aeronautical University · **Adjunct Faculty** · Prescott, AZ

Jan 2021 – Aug 2022

- Designed and taught GEO 210, Introduction to GIS, from scratch: lecture series, labs, final project and rubric, plus a 12-lecture online package; taught online and in person.

Yavapai County · **GIS Specialist** · Prescott, AZ

Oct 2019 – Feb 2021

- Ran and modernized county GIS systems dating back to 2013: ~200 Python (ArcPy) scripts plus FME, SSIS and PowerShell jobs that took in weekly updates from 11 cities and towns and sent data to Sheriff dispatch, ADOT and the State 9-1-1 program.
- Owned the county's NG911 data and automated its migration from legacy formats to the NENA NG911 schema across 8,000+ square miles, used for 9-1-1 call routing.
- Built a road centerline QA/QC suite, change-detection reporting and the fishbone address QA method, and the county's public COVID-19 dashboard with the Emergency Operations Center.

AmeriCorps with the US Army Corps of Engineers · **GIS Mapping Technician** · Williamson County, TX

2012 – 2013

- Began as an intern in the final semester of college. Mapped the Lake Georgetown trail system, catalogued Native American archaeological sites, and produced print maps for visitors.

EDUCATION & CERTIFICATIONS

Education

M.S. Geographic Information Systems Technology , University of Arizona	2019
B.S. Parks and Recreation Management , Northern Arizona University	2013

Certifications

Google Project Management Foundations , Coursera	2022
FME Certified Professional , Safe Software	2021 – 2024
FAA Part 107 Remote Pilot , FAA	2021
Google IT Automation with Python Professional Certificate , Coursera	2020

SPEAKING & COMMUNITY

- 7 conference talks, 4 co-presented with ADOT: GIS-T 2022 (3), Esri Roads & Highways User Group 2021, AGIC 2021 (2) and AGIC 2020.
- Co-founded and co-moderated the FME in Transportation SIG (2021 – 2022): hosted guest speakers and Ask Me Anything sessions and gave several talks, one on building WZDx 4.0 feeds from ArcGIS services with FME Server.
- Past voting member of the AGIC 9-1-1 Data Committee and past member of NENA and US DOT WZDx groups; member of the Student Conservation Association.