

EUGENIE HUANG

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GIS Developer with 10+ years of software engineering experience building geospatial and data-driven applications for public-sector, infrastructure, and operational workflows. Strong background in Esri technologies, C#, ASP.NET Core, JavaScript, Python, SQL, and web GIS development, with experience building mapping tools, automating spatial data workflows, supporting field data collection, and translating client needs into maintainable technical solutions.

SKILLS

GIS & Esri: ArcGIS Pro, ArcGIS Online, Experience Builder, Dashboards, Field Maps, Instant Apps, StoryMaps, ArcGIS Maps SDK for JavaScript, ArcPy, QGIS, PyQGIS

Programming: C#, Python, JavaScript/TypeScript, HTML, CSS, SQL

Web & Application Development: ASP.NET Core, Angular, React, Flask, REST APIs, Web Services

Data & Systems: SQL Server, PostgreSQL/PostGIS, Docker, Linux, Git/GitHub/GitLab

PROFESSIONAL EXPERIENCE

State Cartographer's Office, Madison, WI

Project Manager | Aug. 2025 – Present

- Led the WisDOT Right of Way Plats Georeferencing Project from planning through delivery, improving the consistency and usability of georeferenced land records.
- Improved team efficiency by 22% by developing ArcPy automation scripts for CRS validation, file renaming, export processing, and QA checks, creating more reliable GIS data maintenance workflows.
- Standardized recurring geospatial tasks by documenting ArcPy workflows, QA/QC procedures, and file-processing standards for team use.
- Supervised 10 student interns and coordinated project timelines, QA/QC, deliverables, and stakeholder communication across WisDOT and SCO teams.

GISPP Fellow | Sept. 2024 – July 2025

- Migrated public-facing GIS applications to ArcGIS Online by configuring Web Maps, Instant Apps, and Experience Builder, improving maintainability and user access.
- Modernized Survey Control Finder and PLSS Locator by transitioning legacy Leaflet.js tools to ArcGIS Map Components and ArcGIS Maps SDK for JavaScript.
- Reduced historical imagery retrieval time by 81% by automating USGS M2M downloads with Python and ArcPy.

City of Round Rock, Round Rock, TX

GIS Intern | May – Aug. 2025

- Developed GIS operational tools using ArcGIS Field Maps, Dashboards, Experience Builder, ArcGIS Online Notebooks, and Python SDK for real-time field data synchronization.
- Completed the city's transition to digital field workflows for Fire and Water Management teams, improving emergency response visibility and day-to-day data updates.
- Modernized the CityView platform by migrating legacy JavaScript to a modular React/Vite architecture and improving GIS application maintainability with Arcade expressions.
- Supported municipal asset and parcel-linked workflows by connecting protected-tree records to parcel data for operational use.

Wisconsin Nuclear Energy Siting Study, Madison, WI

Project Assistant | Jan. 2026 – Present

- Coordinated multi-agency geospatial data integration across PSC, ORNL, PNNL, WHS, WisDOT, and WiDNR using 50+ feature layers for statewide screening and suitability analysis.
- Increased preprocessing efficiency by 37% by developing Python/PyQGIS scripts for reprojection, rasterization, clipping, buffer analysis, and focal analysis.
- Supported stakeholder decision-making by creating standardized inputs and suitability analysis outputs across environmental, regulatory, and socioeconomic constraints.

GeoDS Lab, Madison, WI

Research Assistant | May 2025 – Present

- Collaborated on an interdisciplinary AMR research initiative across the GeoDS Lab, State Cartographer's Office, School of Pharmacy and Marshfield Clinic Research Institute to map spatial patterns of antibiotic resistance in Wisconsin.
- Performed advanced spatial statistics (hotspot analysis, spatial lag/error models, spatial autoregressive probit) using ArcGIS Pro, ArcPy and R to reveal geographic disparities and hidden drivers of antimicrobial resistance.

Greenacre Law, San Diego, CA (Remote)

Geospatial Consultant | Mar. 2026 – Present

- Built repeatable geospatial data pipelines by integrating client, referral, and advertising datasets in PostgreSQL/PostGIS for clustering and trend analysis.
- Translated spatial and temporal patterns in client and high-value client distribution into actionable business insights for non-technical stakeholders.

Sun-Net Cyber Inc., Taipei, Taiwan

Senior Software Engineer, Geospatial Team | 2022 – 2024

- Increased maritime intelligence processing efficiency by 54% by refining automated geolocation and metadata extraction workflows.
- Strengthened system integration and maintainability by publishing backend services and APIs for production interfaces and participating in peer code reviews.
- Delivered real-time spatial visibility for government and healthcare users by launching a Web GIS platform during the COVID-19 emergency response.

Project Manager and Senior Software Engineer, Artificial Intelligence Team | 2019 – 2022

- Reduced threat response time by 27% by building a real-time cybersecurity dashboard and automated alerting system.
- Improved customer workflow efficiency by redesigning interfaces and refining ML application workflows, increasing operational efficiency by 40%.
- Streamlined delivery readiness by translating stakeholder needs into application changes, testing plans, and deployment-ready improvements.

LC Networks Communication Inc., Taipei, Taiwan

Junior Software Engineer / IT Technician | 2014 – 2019

- Reduced query response time by 33% by redesigning system architecture for a large-scale search platform supporting 30 million daily records.
- Developed SQL Server-backed applications and automated data-processing workflows supporting data operations, security, and system stability.
- Managed web, database, and virtual server environments, supporting stable production operations and issue resolution.

EDUCATION

University of Wisconsin-Madison

M.S. in Cartography and GIS | Expected Dec. 2026 | GPA: 3.89/4.00

National Defense University (N.D.U.), Taipei, Taiwan

B.A. in Information Management | GPA: 3.86/4.00 | Rank: 1st in the graduation class

CERTIFICATIONS

- NGA Certificate, Intermediate GIS Analyst (2023) | Expertise in geospatial analysis and cartographic principles
- Red Hat Certified Engineer (RHCE) (2019) | Linux system administration and automation

SELECTED AWARDS

- President's Choice & People's Choice, Wisconsin Land Information Association Map Contest, 2026
- Honorable Mention, CaGIS David Woodward Digital Map Award, 2026
- 1st Place, Petchenik Memorial Graduate Award in Cartographic Design, 2025