

# James F.L. Thompson

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## PROFESSIONAL SUMMARY

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GIS Analyst and web cartographer with 3+ years of experience developing transportation, environmental, and geospatial analysis solutions for engineering consulting projects. Specialized in ArcGIS Pro, spatial analysis, open-source web mapping, and GIS automation using JavaScript and Python. Skilled in building interactive MapLibre GL JS applications, processing large geospatial datasets, field data collection, GNSS workflows, drone imagery acquisition, and cartographic visualization. M.S. Digital Mapping (4.0 GPA, University of Kentucky) with FAA Part 107 certification.

## TECHNICAL SKILLS

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**GIS & Spatial Analysis:** ArcGIS Pro, ArcGIS Online, ArcGIS Field Maps, QGIS, Linear Referencing, Spatial Analyst, 3D Analyst, Location Referencing, Geospatial Modeling, Raster & Vector Analysis

**Web Mapping & Development:** MapLibre GL JS, Leaflet, JavaScript, HTML/CSS, Python, D3.js, GeoJSON, Vector Tiles, PMTiles, Vite, GitHub

**Data Collection & Remote Sensing:** Eos Arrow 100 GNSS, ArcGIS Field Maps, UAV/Drone Operations (FAA Part 107), LAS/LiDAR Processing, Terrain & Surface Modeling

**Cartography & Visualization:** Interactive Web Cartography, Transportation & Environmental Mapping, Noise Modeling Visualization, Print & Digital Map Design

## WORK EXPERIENCE

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### Palmer Engineering

**Aug. 2022 – Present**

*GIS Analyst*

*Winchester, KY*

- Develop transportation, environmental, and infrastructure mapping products for engineering consulting projects across Kentucky.
- Perform geospatial analyses supporting roadway safety improvement strategies using spatial statistics, linear referencing, crash analysis, and location-based datasets.
- Design and develop interactive web mapping applications using ArcGIS Online, MapLibre GL JS, JavaScript, and open-source geospatial technologies.
- Build automated GIS workflows and data processing tools using Python and ArcGIS Pro to improve efficiency for spatial analysis and project deliverables.
- Generate custom cartographic products including transportation, environmental, terrain, and noise exposure visualizations for technical reports and public-facing deliverables.
- Process, manage, and analyze large geospatial datasets including vector, raster, and crash data.
- Conduct field data collection using ArcGIS Field Maps and Eos Arrow 100 GNSS equipment for transportation and environmental assessments.
- Support traffic noise studies through field measurements and modeling using the FHWA Traffic Noise Model (TNM 2.5).
- Capture and process drone imagery and field photography to support engineering assessments, mapping, and project documentation.
- Prepare and publish raster and vector tile services optimized for modern web cartography and interactive GIS applications.

### Northern Kentucky University

**Apr. 2022 – Aug. 2022**

*Stream Restoration Specialist*

*Highland Heights, KY*

- Conducted stream, wetland, and riparian buffer restoration and construction projects.
- Assessed stream type and condition using standardized field evaluation techniques.
- Supervised and trained student employees and contractors in field restoration methods.

### NV5 Geospatial

**May 2019 – Apr. 2022**

*Senior GIS Technician*

*Lexington, KY*

- Maintained accurate point cloud classifications of LAS data to USGS specifications.
- Analyzed digital elevation and surface models for inaccuracies and corrected geospatial data.
- Prepared and coordinated project deliverables across team members for large-scale geospatial projects.

## SELECTED PROJECTS

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### Kentucky Transportation Noise Web Map

- Developed a statewide interactive noise exposure visualization using MapLibre GL JS and vector tile services.
- Integrated raster and vector geospatial datasets into a custom open-source web cartography workflow.
- Designed custom cartographic styling and interactive data visualization.

### Interactive Crash Analysis Web Applications

- Built web mapping tools for visualizing crash severity, filtering transportation datasets, and analyzing roadway safety conditions.
- Developed dynamic filtering, popup visualizations, time-slider tools, and D3.js chart integration.

### GIS Automation & Spatial Processing Workflows

- Created Python-based ArcGIS Pro scripts for automating spatial analysis, feature processing, crash analysis, and transportation data management.
- Reduced manual processing time and standardized output formats across multi-project deliverables.

## EDUCATION

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### University of Kentucky

*M.S. Digital Mapping*

- 4.0 GPA

**May 2026**

*Lexington, KY*

### Eastern Kentucky University

*B.S. Geology and GIS*

- Magna Cum Laude (3.7/4.0 GPA)

**May 2020**

*Richmond, KY*

## CERTIFICATIONS & INTERESTS

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- **Certifications:** sUAS Remote Pilot (FAA, Part 107)
- **Interests:** judo, MMA, weightlifting, hiking, trail running, rucking, cartography, geology