

# William Matthew Cornejo

New York, NY | [wcornejo3000@gmail.com](mailto:wcornejo3000@gmail.com)

[LinkedIn](#) | [Portfolio](#)

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## Professional Summary

GIS Developer and Geospatial Data Scientist with 3+ years of hands-on experience in renewable energy optimization, environmental conservation, and urban infrastructure planning. Proven track record developing automated geospatial solutions and managing large-scale spatial datasets.

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## EDUCATION

**Hunter College, City University of New York**

Master of Science in Geographic Information Systems (GIS)

New York, NY

August 2023 – Present

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## TECHNICAL SKILLS

**Programming Languages:** Python, C++, C, Java, SQL, R, Go, HTML

**GIS & Data Tools:** ArcGIS, QGIS, GDAL, Jupyter Notebook, pandas, numpy, sklearn

**DevOps & Cloud:** Docker, Kubernetes, OpenShift, Ansible, Git, GitHub Actions, Tekton

**Languages:** Spanish (Fluent)

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## EXPERIENCE

**Geospatial Data Science Intern**

August 2024 – Present

*National Renewable Energy Laboratory*

- Support wind and solar energy delivery systems across 15+ states, contribution to \$2.4B in renewable energy infrastructure projects
- Lead data organization initiative to minimize file redundancies by 40% across 10TB+ of vector and raster datasets
- Process 50+ geospatial datasets using Python and GDAL on high-performance computing resources for large-scale geospatial analysis

**Graduate Mentored Researcher**

January – May 2025

*Hunter College*

- Analyzed food accessibility for 8.3 million NYC residents using R and advanced spatial statistics
- Developed interactive web map highlighting Benzene and PM2.5 concentrations across 5 boroughs
- Applied JavaScript, HTML and CSS to design and publish 3+ geospatial visualizations for public health research

**GIS Trails Mapping Intern**

June - August 2024

### *The Natural Areas Conservancy*

- Mapped 10+ miles of trails at 627-acre Floyd Bennett Field, increasing trail documentation by 50%
- Created 5 comprehensive trail maps for NYC Parks
- Installed 14 feet of erosion-control structures to improve accessibility in 10+ sensitive natural areas

### **Park Management & GIS Intern**

July 2023 - June 2024

#### *NYC Parks and Recreation*

- Applied GIS analysis to solve infrastructure challenges across 30,000+ acres of NYC parks
- Digitized 30+ storm drain locations across Northern Manhattan
- Led volunteer teams of 100+ individuals in park restoration and replanting initiatives

### **Data Analyst Intern**

May - September 2023

#### *Sunergi*

- Mapped 5,000+ solar installations across Maryland using AI-powered geographic software
- Contributed to development of comprehensive US solar panel mapping initiative

### **Edge-AI Intern in Robotic Ecosystems**

June - August 2021

#### *IBM Thomas J. Watson Research*

- Developed AI framework supporting 10+ robotic platforms, reducing deployment by 60%
- Created modular architecture separating AI components from sensing systems
- Implemented solutions in SPOT simulator and Gazebo environment, testing 100+ scenarios

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## **PROJECTS**

### **PM2.5 and Benzene Web Map**

May 2025

- Designed an interactive web map visualizing sources and impacts of air pollutants
- Enabled users to filter data, search 200+ locations, and toggle 6 map layers dynamically
- Built using JavaScript and Leaflet for responsive geospatial functionality, achieving 2-second average load time

### **Northern Manhattan Storm Drain Mapping**

January 2024

- Developed comprehensive drainage infrastructure maps for 5 Manhattan parks
- Digitized and field-verified 200+ historical catch basin and manholes data for 98% accuracy
- Contributed spatial datasets to official NYC Parks database serving 500+ staff members via ArcGIS Online

### **North Forty Natural Area Trail Mapping**

June - August 2024

- Conducted ground-truthing across 150-acre natural systems, documenting 8+ miles of previously unmapped trail systems
- Maintained trail conditions through vegetation management across 25+ work sites
- Integrated trail data into official NYC Parks Trail Map system used by 25,000 annual visitors

### **Interactive Splash App**

July 2023

- Built web-based interactive map displaying 50+ Manhattan spray showers
- Deployed application using ArcGIS Online platform for public accessibility

## **IPARC Spatial Issue Tracking**

January 2024

- Created spatial tracking system categorizing 500+ Manhattan Parks maintenance issues
- Developed 4-tier classification system optimizing repair workflows
- Maintained using ArcGIS FieldMaps for real-time updates, processing 100+ weekly updates

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## **PUBLICATIONS**

**Author of “Object-Oriented Programming in GIS Applications”**

May 2025

<https://gistbok-topics.ucgis.org/PD-01-021>

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## **LEADERSHIP & VOLUNTEER EXPERIENCE**

**Club President**

September 2011 – 2018

*Queens Las Americas Leos Club*

- Led 20-member community service organization for adolescents in Queens
- Coordinated 15+ volunteer events including soup kitchens, park cleanups, and senior center visits
- Established partnerships with 15+ local charitable organizations