

Michael Warren

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PROFESSIONAL SUMMARY

Detail-oriented and results-driven GIS specialist with substantial expertise in geospatial analysis, application development, and corporate GIS administration. Capable of using cutting-edge technologies, including ArcGIS Enterprise Suite, Python, and open-source GIS platforms, to develop novel solutions to complex spatial problems. Proven experience in automating procedures, developing predictive models, and building user-friendly dashboards to support data-driven decision-making. Strong collaborator with a track record of integrating multiple datasets, improving system performance, and aligning geospatial solutions with business objectives. Recognized for outstanding problem-solving abilities, technical knowledge, and the ability to handle high-risk projects with accuracy and efficiency.

CORE COMPETENCIES

GIS Application Development • Geospatial Data Analysis • ArcGIS Enterprise Administration • Python Scripting for GIS • Spatial ETL Processes • Database Management • Web Map Design • REST API Integration • Geospatial Visualization • Emergency Response Mapping • Machine Learning for GIS • Predictive Modeling • Open-Source GIS Tools • High-Performance Computing • Geospatial Dashboard Development • Data Automation • Regulatory Compliance Mapping • Stakeholder Collaboration • CAD-GIS Integration • Cloud GIS Solutions

LANGUAGES & TECHNOLOGIES

Expert: Python, Mojo, R, SQL, Go | **Proficient:** JavaScript, HTML5, CSS | **Learning:** C#, .NET

PROFESSIONAL EXPERIENCE

GIS Developer | Freelance – Remote | July 2023 – Feb 2026

- Designed and developed custom GIS applications using Leaflet, OpenLayers, and ArcGIS API, creating interactive mapping solutions tailored to client-specific spatial and business needs.
- Automated geospatial data processing, analysis, and visualization workflows using Python and SQL, significantly reducing manual efforts and improve operational efficiency.
- Integrated GIS platforms with enterprise systems such as CRM, ERP, and IoT, enabling seamless data sharing, enhanced spatial analytics, and improved decision-making processes.
- Provided technical consultation on GIS infrastructure, optimizing performance, scalability, and system reliability for diverse industries, including real estate, utilities, and logistics.

GIS Consultant SME | Verizon | Dec 2023 – Jan 2024

- Debugged and optimized a custom GIS map within ArcGIS Enterprise, resolving critical performance issues and producing an interactive wireless network visualization for the CIO.
- Developed a dynamic web-based map using Leaflet, Mapbox, and ArcGIS, allowing stakeholders to analyze and interact with real-time cell tower locations, coverage areas, and network performance metrics.
- Collected, cleaned, and integrated geospatial data from multiple sources, including cell tower databases, network performance logs, and demographic datasets, ensuring accuracy and consistency in reporting.
- Maintained and enhanced backend GIS infrastructure, improving system scalability, enabling real-time data updates, and ensuring seamless integration with Verizon's telecommunication and operational systems.

GIS Administrator / Developer | Google Fiber - Austin, TX | October 2022 – July 2023

- Designed, deployed, and maintained enterprise-grade GIS applications using ArcGIS Enterprise Suite, 3-GIS, and the Esri JavaScript API SDK to support high-performance geospatial operations.
- Automated complex geographic data operations with ArcPy, reducing manual data processing efforts by 30% and improving operational efficiency.
- Designed and maintained reliable ETL pipelines for smooth geospatial data integration, assuring the integrity and accessibility of important datasets for large-scale geospatial analysis.
- Geospatial databases were administered, data storage was optimised, and sophisticated geospatial analysis was carried out to assist decision-making and infrastructure development.

GIS Analyst | SoCalGas - Los Angeles, CA | December 2021 – March 2022

- Performed advanced geospatial analysis and modeling to support natural gas infrastructure projects, including damage assessment, methane monitoring at Aliso Canyon, and regulatory reporting compliance.
- Provided crucial earthquake analysis and emergency response solutions as part of the Emergency Operations Center (EOC), using GIS technologies to improve real-time decision-making during emergencies.
- ArcGIS Enterprise was administered and adjusted to provide high system uptime, data quality, and geographic layer management efficiency for the enterprise.
- Predictive analysis and GIS models were used to assess infrastructure damage before to field inspections, which improved readiness and resource allocation.

ArcGIS Enterprise Analyst | Esri - St. Louis, MO | October 2020 – September 2021

- Provided skilled technical assistance for ArcGIS Enterprise Suite and associated Esri products, diagnosing and resolving challenging user problems for worldwide customers from a variety of sectors.
- Identified and documented software defects, contributed to product upgrades, and wrote thorough knowledge base articles for an internal CMS to aid in issue resolution.
- Implemented industry best practices for project execution, including comprehensive justifications to improve processes and guarantee alignment with corporate objectives.
- Collaborated with cross-functional teams to support knowledge transfer, enabling smooth onboarding, thorough documentation, and long-term operational success for both internal and external stakeholders.

GIS Coordinator | City of Paris - Paris, TX | June 2020 – October 2020

- Administered and maintained the city's GIS infrastructure, combining AsBuilt CAD drawings and merging diverse infrastructure layers into a single basemap for stakeholder and public usage.
- Developed and implemented GIS maps and online apps for county workers and emergency responders, using ArcGIS Online, Tableau, and other commercial and open-source technologies to improve situational awareness and operational planning.
- Developed and deployed custom GIS solutions using GeoPandas, Leaflet, and Matplotlib to enhance geographic visualization, data presentation, and project customization, meeting diverse stakeholder requirements.
- Collaborated with municipal departments and external organizations to provide accurate geospatial data management, smooth project integration, and efficient decision-support tools.

GIS Analyst – Paid Research | Commonwealth Center for Recurrent Flooding Resiliency - Norfolk, VA | June 2019 – August 2019

- Designed and developed an advanced flood impact model incorporating machine learning algorithms and field-based geospatial sensors to analyze and predict flood risks.
- Completed thorough flood impact assessments, including economic analysis and forecasts, to aid decision-making for organizations such as the Virginia Department of Emergency Management (VDEM), ODURE, CCRFR, and VIMS.
- Diverse geographic datasets were included into analytic processes, guaranteeing excellent data accuracy and relevance for hydrological modeling and disaster planning.
- Collaborated with multidisciplinary teams to give actionable insights and thorough reports on infrastructure resilience and long-term mitigation plans.

Computational Scientist | Old Dominion University Research Foundation - Norfolk, VA | August 2018 – August 2019

- Performed molecular dynamics simulations using high-performance distributed computing clusters, advancing research in computational chemistry and materials science.
- Streamlined and automated molecular research workflows using Python, Bash, and Fortran scripting, achieving a 40% improvement in simulation processing performance while ensuring data accuracy and integrity.
- Created and improved computer models to simulate complicated molecular interactions, resulting in useful insights for academic papers and external initiatives.
- Collaborated with diverse teams to improve computational approaches, guaranteeing adherence to cutting-edge scientific standards and research goals.

GIS Analyst and Developer | Pallaton Energy - Austin, TX | January 2016 – December 2017

- Developed and executed strategic GIS mapping and planning solutions for oil and gas leases in the Permian Basin, assuring data quality and industry compliance.
- Created and maintained GIS data, interactive web maps, dashboards, and applications using Esri ArcGIS Suite, FME Server, and related tools to enhance project analysis and reporting capabilities.

- Processed and integrated vector and raster data using ERDAS Imagine, Field Maps, and QGIS on AWS, ensuring accurate data correction and improved geospatial analysis.
 - Automated spatial ETL procedures using Python, offering near-real-time dashboards and integrating third-party and open-source APIs via a REST API endpoint for faster data sharing and visualization.
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EDUCATION

- **Bachelor of Science in Geography** | Professional Certificate in GIS
Old Dominion University, Norfolk, VA | Graduation Year: 2019 | GPA: 3.91
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CERTIFICATIONS

- ArcGIS Enterprise: Administration Workflows (Esri)
 - Portal for ArcGIS Security (Esri)
 - ArcGIS Server Security (Esri)
 - ArcGIS Pro 2.8 (Esri)
 - ArcGIS Enterprise 10.9 (Esri)
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AWARDS: 1st Place GIS Day Cartography and Remote Sensing Award | Old Dominion University