

# JOHN SOLLY

Columbus, OH | 279.321.2870 | [blogthedata.com](http://blogthedata.com) | [jsolly@pm.me](mailto:jsolly@pm.me) | [linkedin.com/in/jsolly/](https://linkedin.com/in/jsolly/)

## LEAD SOFTWARE ENGINEER

**A strategic and dedicated Senior Software Engineer with a demonstrated history of working with geospatial applications and complex data solutions.** A proven leader and mentor with a passion for maintaining the highest code quality standards. Expertise in developing bespoke geospatial applications, owning product implementations, and driving engineering leadership. Well-regarded for documenting well, showing ownership, and excelling as a tech lead with a comprehensive background in software development, databases, web development, and DevOps.

## AREAS OF EXPERTISE

Software Engineering | Geospatial Technologies & Analytics | Database Management | SQL Performance Tuning | Web Development | Automation | DevOps | Cloud Computing | Serverless Architecture | Agile | Big Data | Data Warehousing and Star Schema | Test-Driven Development (TDD) | Paired Programming | Unit Testing | Technical Writing | Continuous Integration & Continuous Delivery (CI/CD) | Rapid Prototyping | Cross-Functional Leadership | Technical Mentorship | ETL Pipeline Architecture | RESTful, SOAP, and JavaScript APIs | Security & Production Issue Resolution | Migration & Upgrade Planning | User Authentication & Profile Management | Large Language Models (LLM) | Advanced Algorithm Development | Visualization Tools & Libraries | Quality Assurance | Release Coordination

**Languages:** Python | TypeScript | JavaScript | Golang | SQL/NoSQL | Shell/Bash | SQL | Java

**Geospatial:** PostGIS | GeoPandas | SQLAlchemy | GDAL | Dask | ArcGIS | Mapbox GL | Turf.js | Deck GL | OpenLayers | Leaflet

**Databases:** RDS | Postgres | MongoDB | DynamoDB | SQLite | MSSQL | MySQL | IPFS

**Web Development:** Vue | Svelte | React | Django | Cloudflare | GitHub Actions | Bootstrap | Vite | TailwindCSS

**DevOps & Cloud:** Docker | Terraform | GitHub Actions | EC2 | S3 | RDS | IAM | Lambda | CloudWatch | Amplify

## CAREER HIGHLIGHTS

- **Increased Efficiency:** Achieved a 58% reduction in manual testing time through automated testing and rearchitecting manual QA test plans; this efficiency gain saved thousands of dollars and enabled the team to reach feature completion two weeks earlier each quarter, significantly accelerating project timelines.
- **Innovation:** Championed the adoption of serverless technology stacks, significantly reducing costs and complexities in geospatial application development. Additionally, I led the forefront in embracing the latest OGC standards and data formats, including ZARR, COG, and STAC. Pioneered integrating these cutting-edge technologies in critical projects, enhancing data processing speed, scalability, and infrastructure efficiency.
- **Leadership:** Successfully sourced, hired, and mentored full development teams, fostering a culture of excellence and growth. Took charge of delayed projects, implementing effective strategies to steer them back on course and ensuring their successful delivery to satisfied clients. Standardized a UI component library and front-end framework across the company, harmonizing development processes and enhancing product consistency.
- **Open-Source Contributions:** Developed and maintained open-source projects such as [web3-geo-dashboard](#), [ipfs-stac](#), and [awesome-django-blog](#). Organized a HOTOSM marathon, attracting 200 participants including students, faculty, and community members. Successfully secured \$500 funding for the event, enhancing engagement and participation.

## PROFESSIONAL EXPERIENCE

### SENIOR SOFTWARE ENGINEER

SEPT 2023 — PRESENT

New Light Technologies | Washington D.C. (remote)

- Guide software decision-making, standardizing Amazon cloud services for deployments, adopting Vue.js for reactive front-ends, and implementing a uniform UI component library across all projects.
- Led a major government project, architecting a serverless solution with Amazon services for data-driven decision-making. Emphasized high coding standards, effective CI/CD, and agile development.
- Assumed technical leadership in my first week at NLT, rescuing a delayed project. Implemented a turnaround strategy, focusing on refactoring for performance optimization and reconfiguring the cloud deployment using Terraform CDK, ultimately delivering a successful solution to a satisfied customer.

### SENIOR GEOSPATIAL DEVELOPER

SEPT 2022 — SEPT 2023

EASIER Data Initiative | College Park, MD (Remote)

- Hired and led a skilled team of 4 engineers in agile/kanban development, focusing on decentralized cyberinfrastructure and technical growth.
- Designed and executed ETL pipelines for large-scale data management, skillfully handling over 300TB+ of COG and ZARR data using decentralized storage systems like Filecoin and IPFS.
- Contributed to open-source projects [ipfs-stac](#) and [web3-geo-dashboard](#) on GitHub, enhancing geospatial data integration with GIS applications like QGIS and ArcPro.

## INTEGRATION CONSULTANT

MAY 2021 — FEB 2022

Yellowfin Business Intelligence | Boise, ID (Remote)

- Expertly designed and implemented innovative data solutions leveraging Yellowfin's REST, SOAP, and JavaScript APIs. Successfully orchestrated a major two-version upgrade for Yellowfin's largest ISV, enhancing system capabilities and performance.
- Addressed and resolved dozens of complex level-three production issues in cloud, on-premise, and hybrid environments, diligently maintaining Yellowfin's uptime and availability within the bounds of our Service Level Agreements (SLAs).

## SOFTWARE PRODUCT ENGINEER

MAY 2017 — MAY 2021

Environmental Research Institute (Esri) | Redlands, CA

- Over four years, I successfully managed numerous Dashboard releases as release manager and scrum master for a nine-engineer team. My role involved ensuring consistent, high-quality releases and effectively coordinating with internal QA, localization, internationalization, and release teams.
- Implemented a dockerized automated regression testing harness using Python, Selenium, and Jenkins, resulting in a remarkable reduction of manual testing hours from 240 to 100 per quarter, a 58% efficiency gain.

## SOFTWARE PRODUCT ENGINEER INTERN

JUNE 2016 — AUG 2016

- Led the development of impactful story maps and web applications used by state governors and constituents and showcased advanced JavaScript mapping solutions at Esri UC to an audience of 14,000 industry professionals.

## RELEVANT PROJECTS

### U.S. GOVERNMENT SPENDING APPLICATION

- Designed to empower non-technical decision-makers, this serverless Vue.js dashboard application simplifies the analysis and interpretation of complex financial and demographic data, boosting decision-making efficiency. Its user-friendly interface and real-time integration have notably advanced transparency and accountability in governmental fiscal management.

### WEB3 GEOSPATIAL DASHBOARD

- [Web3-geo-dashboard](#) is a revolutionary web3 mapping application that provides an intuitive 'at a glance' view of geospatial data stored in Filecoin deals. This platform is engineered with a multi-tiered storage solution, utilizing Hot (Amazon S3), Warm (IPFS), and Cold (Filecoin) data storage layers to serve data efficiently and cost-effectively.
- Users can easily access, analyze, and download diverse datasets, with the added capability to securely conduct imagery transactions using integrated crypto wallet features.

### DECARBONIZATION ANALYTIC APPLICATION

- Transformed a Vue.js decarbonization analytic tool, eliminating Excel reliance to empower non-technical users in conducting comprehensive analyses and generating detailed reports seamlessly.

### IPFS-STAC

- Coauthored [ipfs-stac](#), a Python package that seamlessly integrates STAC (SpatioTemporal Asset Catalog) with IPFS (InterPlanetary File System). This integration facilitates user interaction with IPFS assets stored on STAC servers through native Python objects, enhancing accessibility and usability of geospatial data within the web3 ecosystem.

## EDUCATION

**Master of Science, Geospatial Intelligence | George Mason University | GPA: 3.93**

**Bachelor of Arts, Geoinformation Science | University of California, Santa Barbara | GPA: 3.85**

**Bachelor of Science, Computer Science (In Progress) | Open Source Society University (OSSU)**