Jason Ives

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Academic Portfolio: https://jasonives.github.io/Portfolio/ | LinkedIn: www.linkedin.com/in/jason-r-ives

Professional Summary

Senior Data Systems Architect & Master of Data Science Candidate specializing in the intersection of global research operations and advanced analytics. Proven track record of developing Python-based automation and managing high-stakes data capture lifecycles across Africa and South Asia. Transitioning deep field experience into machine learning, AI research, ETL architecture, and geospatial modeling.

Education

University of Guelph | Guelph, ON - Master of Data Science | Geospatial Stream | Expected August 2026

Arizona State University | Tempe, AZ - B.S. in Psychology | Minor in Philosophy

Core Competencies

- **Data Engineering & Languages:** Python (Advanced), SQL, R, PySpark, ETL Pipeline Optimization, Git-based Version Control.
- **AI & Machine Learning:** Scikit-learn, PyTorch, Deep Learning, Predictive Modeling, LLM Mechanics and Ensembles, Model Evaluation and Metrics.
- **Spatial & Applied Science:** Spatiotemporal Modeling (ST-MELD), ArcGIS Pro, Arcpy, R (sf/osmdata), Whitebox Workflows, LiDAR Processing, Environmental Simulation.
- **Systems & Operations:** Data Governance, Global Team Leadership, CSPro, ODK, Medidata Rave, Logistics for Challenging Technical Environments.

Technical Projects

ST-MELD: Developed a predictive simulation model using Python and Whitebox Workflows to analyze complex molten material flows, demonstrating expertise in spatiotemporal modeling and geospatial data engineering.

V-BReE: Built a multi-agent refinement framework using Python, focusing on iterative response optimization and reduced intra-ensemble sycophancy to generate high-accuracy model responses.

Ground Logistics Dashboard: Designed and built a weather-centric routing dashboard that dynamically optimizes truck dispatching by translating real-time meteorological data into road-impedance cost networks.

Final Project (Ongoing): Developing a high-performance, lightweight deep learning model in Rust for LiDAR point cloud classification. Optimizing for computational efficiency to enable seamless integration into the Whitebox Workflows open-source geospatial toolkit.

Professional Experience

Senior CSPro Programmer | Columbia University ICAP | New York, NY | 2023 – Present

- Lead the programming of tablet-based edge-to-cloud survey instruments for the PHIA project.
- Ensure stable data collection for high-sensitivity HIV impact assessments in low-connectivity settings.
- Conduct rigorous testing and oversight of in-country development to maintain data quality and instrument performance.

Senior Research Operations Associate | Westat | Rockville, MD | 2004 – 2023

- Lead the programming of tablet-based edge-to-cloud survey instruments across multiple projects, platforms, and deployment locations.
- Designed and built Python-based tools to automate data capture workflows and improve survey instrument generation efficiency.
- Established internal CSPro and ODK development groups and provided technical guidance for project-specific teams.
- Modernized the development lifecycle by implementing Git-based version management for CSPro projects.
- Managed on-site technical deployments and provided hands-on training across Africa and South Asia.