

Jesse E. Sprague

Geospatial Software Engineer

✉ spatialdata@protonmail.com | 🏠 purespatial.com | 📺 ax0n-pr1me | 📺 ax0n | 🌐 spatialdata

"Clarify, ideate, develop, and implement technology solutions for industry problems"

Skills

Management Strengths	Communication, Agile, Domain Driven Design, Proposals, Budgets, Strategic Planning
Technology Skills	Serverless, React, Node, MongoDB, PostgreSQL, Jupyter, Numpy, SciKit, PyTorch
Software Tools	Linux, GIT, AWS, Docker, GDAL, OpenCV, QGIS, ESRI, TerraSolid
Languages	JavaScript, Python, R, Bash, YAML, Config, HTML, CSS

Experience

EchoSpectra

Geospatial Software Engineer, Founder

Southlake, TX

Jul 2020 - Current

- Develop novel applications of remote-sensing technologies for critical infrastructure monitoring
- Manage the design and construction of cloud-based geospatial intelligence software and systems
- Lead a team of software engineers, technical experts, and industry advisors
- Establish industry connections while validating and refining the business model
- Build and oversee a world-class team of business and technology professionals

Logos Resources, LLC

Software Engineer

Farmington, NM

Jan 2018 - Aug, 2020

- Created data analysis software tools to maximize profits from oil and gas wells
- Designed and constructed cloud-based business intelligence software and systems
- Designed and implemented modern cloud architectures on AWS infrastructure
- Used Prometheus, Swarmpit, and other cloud monitoring tools to alert on usage, performance, and health

Geospatial Science for Environmental Management Lab, UNM

Research Assistant and Developer

Albuquerque, NM

Aug 2015 - May 2019

- Worked with the Civil Air Patrol (CAP) and the US Army Corps of Engineers (USACE)
- Developed new methods for data analysis and management using Python and R
- Maintained and operated Small Unmanned Aerial Systems (S-UAS)
- Assisted in photogrammetric and remote sensing research

Souder Miller and Associates

Staff Scientist

Farmington, NM

Jun 2014 - Jun 2017

- Managed state, federal, and private natural resource and oil and gas projects
- Served as the primary environmental geologist and regulatory liaison for pipeline release remediation efforts
- Scheduled and managed over 60 pipeline remediation projects totaling over \$1.5M in direct billables
- Built cost estimates and wrote proposals, bids, and requests for bids
- Managed contractors, budgets, and timelines

USGS

Hydrologic Technician

Albuquerque, NM | Nome, AK

Oct 2009 - Aug 2012

- Compiled groundwater data from multiple state, federal, and tribal databases
- Collected groundwater, surface water, and soil samples on multiple project sites
- Conducted GIS analysis and mapped results of environmental investigations (SIR 2012-5019)
- Assisted in drilling and Geoprobe activities for geothermal and environmental investigations (Nome, AK)

Publications

New Mexico

Author

2012 - 2018

- Zhang, S., Bogus, S.M., Lippitt, C.D., and Sprague, J.E. (2018). Geospatial Technologies for Collecting Construction Material Information. In Construction Research Congress 2018 (pp. 660–669). Reston, VA: American Society of Civil Engineers.
- Sprague, J.E., Lippitt, C.D., Paulus, G., Zhang, S. (2017). Evaluating the Stability of SfM-MVS for Digital Surface Model Generation: An Analysis and a Framework. CUAS Marshalplan Report
- Langman, J.B., Sprague, J.E., and Durall, R.A., 2012, Geologic framework, regional aquifer properties (1940s–2009), and spring, creek, and seep properties (2009–10) of the upper San Mateo Creek Basin near Mount Taylor, New Mexico: U.S. Geological Survey Scientific Investigations Report 2012–5019, 96 p

Education

University of New Mexico

Albuquerque, New Mexico

M.S. in GIScience, focus on Computer Science

Aug 2015 - did not defend Thesis

- Research Assistant in Geospatial Sciences for Environmental Management Laboratory (GEM Lab)
- Developed novel photogrammetry and computer vision technology for change detection
- Studied geospatial data science and big-geospatial data processing techniques
- Participated in NSF iCorps business accelerator program

University of New Mexico

Albuquerque, New Mexico

B.S. in Earth and Planetary Science

Aug 2005 - May 2013

- Distributed Sciences Minor in Organic Chemistry and Physics
- Statistical Analysis of Climate Data as Senior Thesis

Extracurricular Activity

American Society for Photogrammetry and Remote Sensing (ASPRS)

Rocky Mountain Region

Member

Feb 2016 - Aug 2018

- Participate in regional conferences as well as the University Chapter
- Train fellow members on UAS operation and licensing

New Mexico Geographic Information Council (NMGIC)

Albuquerque, NM

Student Board Member

Aug 2016 - Aug 2018

- Provide insight into academic perspectives and activities as needed
- Assist planning geography conferences and workshops twice per year
- Assist writing scholarship announcements for geography students

Outdoor Enthusiast

Earth

Traveler

Any Possible Dates

- Climbing, Hiking, Exploring
- Cycling, Mountain Biking
- Eagle Scout

Honors & Awards

Scholarships, Fellowships, and Grants

2018	Award , Inspirational Young Alumnus Award	Albuquerque, NM
2018	Award , AWS Activate [\$100,000]	Albuquerque, NM
2017	Grant , National Science Foundation I-Corps [\$50,000]	Houston, TX
2017	Scholarship , United States Geospatial Intelligence Foundation[\$5,000]	Albuquerque, NM
2017	Fellowship , Marshall Plan Foundation [\$8,000]	Villach, Austria
2016	Grant , New Mexico Research Grant [\$3,000]	Albuquerque, NM
2016	Scholarship , Graduate Research Assistant, GEM Lab	Albuquerque, NM
2016	Fellowship , Jessie Rossbach Graduate Research Fellowship [\$2,000]	Albuquerque, NM
2012	Fellowship , Leonard Undergraduate Research Fellowship [\$5,000]	Albuquerque, NM