

Matthew T. Perry

Full-stack Software Engineer specializing in geospatial data systems.

Database design, distributed systems, web services, data visualization, and software engineering for geospatial applications.

Experience

- 2021-2022 **Senior Software Engineer, Platform** Descartes Labs
Building and maintaining the Descartes Labs geospatial data analysis platform. Primary tools: Python, Rust, Kubernetes, Postgres, Elasticsearch.
- 2019-2020 **Lead Data Engineer** Aurora Insight
Building the ETL systems, data processing infrastructure, and internal applications to map the wireless spectrum via remote radio sensors.
- 2015-2018 **Geospatial Software Engineer** Mapbox
Satellite team, building applications and distributed computing systems to process earth observation data at scale using Python and AWS.
- 2011-2015 **Senior Software Developer** Ecotrust
Lead developer of software, web applications and data analysis workflows to support environmental and economic decision making
- 2009-2011 **Geospatial Web Application Developer** MarineMap Consortium
Lead back-end developer for MarineMap, a Django-based online tool for collaborative marine spatial planning
- 2007-2009 **GIS Analyst** Geosyntec Consultants
Database management, visualization and analysis for environmental remediation and hydrology
- 2005-2007 **GIS Analyst/Software Engineer** NCEAS
Data analysis for research project to quantify threats to the global marine ecosystem. Lead developer of metadata management software.

Education and Certifications

- 2019 **AWS Certified Solutions Architect** Amazon Web Services
Solutions Architect - Associate
- 2005 **Master of Sciences** Humboldt State University
Natural Resource Planning and Interpretation
- 2004 **Certificate of Study** Humboldt State University
Geographic Information Systems and Remote Sensing

Past Projects

- 2014 **Spatial-temporal prediction of climate change impacts**
Presented at SciPy 2014 in Austin, TX and FOSS4G 2014 in Portland, OR.
- 2013 **Forest Planner**
Forest management scenario planning tool. Winner of the 2014 Open Planning Tools Group "Innovative Tool Award".
- 2009 **MarineMap**
Collaborative marine spatial planning tool. Winner of the 2010 U.S. Institute for Environmental Conflict Resolution "Innovation in Technology Award".

For a complete Curriculum Vitae, please visit <https://www.perrygeo.com/cv.html>

Technical Skills

Languages

Python, Javascript, Rust, Clojure, SQL

Geospatial

GDAL, PostGIS, Rasterio, Shapely, QGIS

Data Science

SciPy, scikit-learn, R, Pandas, Keras

Database

Postgresql, PostGIS, Elasticsearch, TimescaleDB, Redis

Front-end

React/Redux, Clojurescript, MapboxGL, Leaflet, OpenLayers

Devops

Linux, Kubernetes, Docker, AWS, GCP, Ansible, Terraform

Contact

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