

MATT FISHER | RESUME

Open Source Geospatial Research Software Developer

Status: Associate Scientist III at National Snow and Ice Data Center

Boulder, CO

Field: Geospatial Software & Data Engineering

orcid.org/0000-0003-3260-5445

Skills: Open science, teaching, FAIR & CARE, Python, TypeScript, software architecture, Linux, containers, CI/CD

mfisher87@gmail.com

A research software developer passionate about open source, community ownership, accessibility, and inclusivity. Open-source software maintainer, co-author of *QGreenland*, and co-author and instructor of *QGreenland 2023 Researcher Workshop*, a 3-day hands-on open-source workshop that broke ground by running the QGIS geospatial analysis environment at classroom scale in the cloud.

Experience

Associate Scientist III - National Snow and Ice Data Center

Apr. 2016 - Present

- **NASA Openscapes Mentor** - Trained researchers in open source development practices
- **2022 CIRES Outstanding Performance Award recipient** - for high-impact work in science communication
- Co-authored *QGreenland*, a free interdisciplinary Greenland-focused GIS analysis and visualization environment
- Co-authored *QGreenland 2023 Researcher Workshop* and [related guest post on Jupyter Blog](#)
- **Presenter at American Geophysical Union 2023 Annual Meeting**
- Architected and developed a graphical async data ordering system for NSIDC data
- Created data processing pipelines and services for research data (e.g. *Sea Ice Index*, *Images of Antarctic Ice Shelves*)
- Modernized legacy software and services
- Developed geospatial data visualization tools including: *ChArctic*, *Arctic Rain on Snow Study Interactive Map*, *Snow Today*, *Antarctica Today*, and *Greenland Today*

Senior Software Engineer - Discover Financial Services

Jun. 2008 - Apr. 2016

- Developed and extended distributed systems on IBM AIX/GPFS and z/OS mainframe infrastructure
- Developed **distributed cardmember rewards processing system** with dozens of vendor integrations serving >50 million users
- Extended a proprietary version control system to add branch support
- Developed business tools for configuring unique rewards promotions and analyzing performance
- Designed relational database (Oracle, IBM DB2) models

Open Source Software Developer - Volunteer

- Maintainer of *viscm* - A tool for developing mathematically-derived perceptually uniform scientific colormaps
- Contributor to *conda-lock* - A tool that enables reproducible software environments in the Conda ecosystem
- Maintainer of *earthaccess* - A library that simplifies searching, downloading, and streaming NASA Earth science data
- Maintainer of conda-forge feedstocks: *earthaccess*, *Quarto*, *viscm*

Education

Certified Instructor - The Carpentries

2023

Bachelor of Science in Computer Information Systems - Bradley University, Illinois, USA

2005-2009

About me

Career interests - Software communities, open science, collaboration

- Education for researchers - open science and inclusive, sustainable community leadership
- Collaborative development, i.e. "pair/group programming"

Personal interests - Tech, music, nature

- Playing, recording, developing, and constructing electric and acoustic musical instruments
- Self-hosted services and home automation with Home Assistant
- Plants (especially organic gardening) and animals (especially dogs)