



Taylor Smith | Scientific Software Engineer

Scientific software engineer specializing in biophysics and bioinformatics, with experience in microscopy and spectroscopy data analysis, computational modeling, and open-source scientific software. Skilled in mentoring teams, leading collaborative projects, and developing robust, reproducible pipelines for biological research.

Education

Ph.D., Biophysics
Example University
2011–2017
Example City

B.S., Biochemistry
Example University
2008–2011
Example City

Skills

Programming Languages

Python C++
 TypeScript JavaScript
 Rust

Scientific & Bioinformatics Tools

Microscopy Image Processing
 Spectroscopy Data Analysis
 Bioinformatics Pipelines
 NumPy / SciPy / Pandas
 Matplotlib / Seaborn / Plotly
 Jupyter

Data Engineering & Software

Apache Airflow / Dask
 Docker / Kubernetes
 Cloud platforms (AWS / GCP)
 CI/CD (GitHub Actions, Jenkins)
 Git / GitHub

Professional Experience

Lead Scientific Software Engineer

Example Bioinformatics Lab
2020–Present

Remote

- Led the end-to-end development of robust, open-source Python libraries for microscopy and spectroscopy data analysis, spanning raw data ingestion, signal processing, statistical modeling, and visualization, with a strong emphasis on reproducibility, performance optimization, and maintainability to support large-scale, high-throughput experimental workflows used daily by interdisciplinary research teams.
- Lead development of open-source Python libraries for microscopy and spectroscopy analysis.
- Designed reproducible pipelines for high-throughput experimental datasets.
- Mentored a team of junior developers and research interns in computational biology tools.
- Collaborated with biologists to integrate software pipelines into laboratory workflows.
- Established coding standards, testing, and CI/CD for bioinformatics projects.

Scientific Software Engineer

Advanced Imaging and Bioanalytics Company
2017–2020

Example City

- Built software for real-time microscopy image acquisition and spectral analysis.
- Developed interactive dashboards for visualization of bioinformatics and experimental data.
- Contributed to open-source scientific analysis projects, including bioimaging libraries.
- Provided workshops and training sessions on computational tools for researchers.

Research Associate

National Institute for Molecular Imaging

2012–2017

Example City

- Automated processing and analysis of microscopy and spectroscopy datasets.
- Assisted in integration of computational models with experimental workflows.
- Contributed example notebooks and documentation to internal bioinformatics libraries.