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Reproducible computational workflows with signac

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The open-source Python framework *signac* is designed to manage data sets and perform operations on the data in an efficient, reproducible, and collaborative way. The framework is particularly well-suited for data-driven exploration of file-based, dynamic and heterogeneous data spaces. In contrast to many databases and task executors, *signac*'s serverless data management and *signac-flow*'s portable workflow model ensure that workflows are just as easily executed on laptops as in high-performance computing environments. The *signac* approach not only increases research efficiency, it also improves reproducibility and lowers barriers for data sharing by transparently enabling the robust tracking, selection, and searching of data by its metadata. Collaboration on *signac* data spaces is as simple as using any shared network file system. In the last year, several features have been added to improve searching, synchronizing, importing, and exporting data.

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