

Awkward Array: The Swiss Army Knife of Irregular Data (and Still a Little Awkward)

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Awkward Array is a stable and widely used Python library for working with nested, variable-length, and irregular data—the kind of data that traditional NumPy arrays can't easily handle. Originally developed for high-energy physics, it has grown into a reliable tool for many fields beyond HEP.

Today, Awkward Array offers strong integration with libraries like NumPy, Numba, JAX, and GPU backends—to name a few. It's fast, flexible, and lets scientists work with complex data structures in a clear, efficient way.

But there's still more we can do. This talk will give a short update on the current status of Awkward Array, recent improvements, and how it fits into the broader scientific Python ecosystem. We'll also discuss ideas for the future: better JAX and GPU support, simpler APIs (or ones that align better with array standards), and stronger connections to other scientific libraries. Even though Awkward Array is already a solid, stable tool, we want to keep making it better—and we invite the community to help guide where it goes next.

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