HTMap

High-Throughput Computing in Python, Powered by HTCondor

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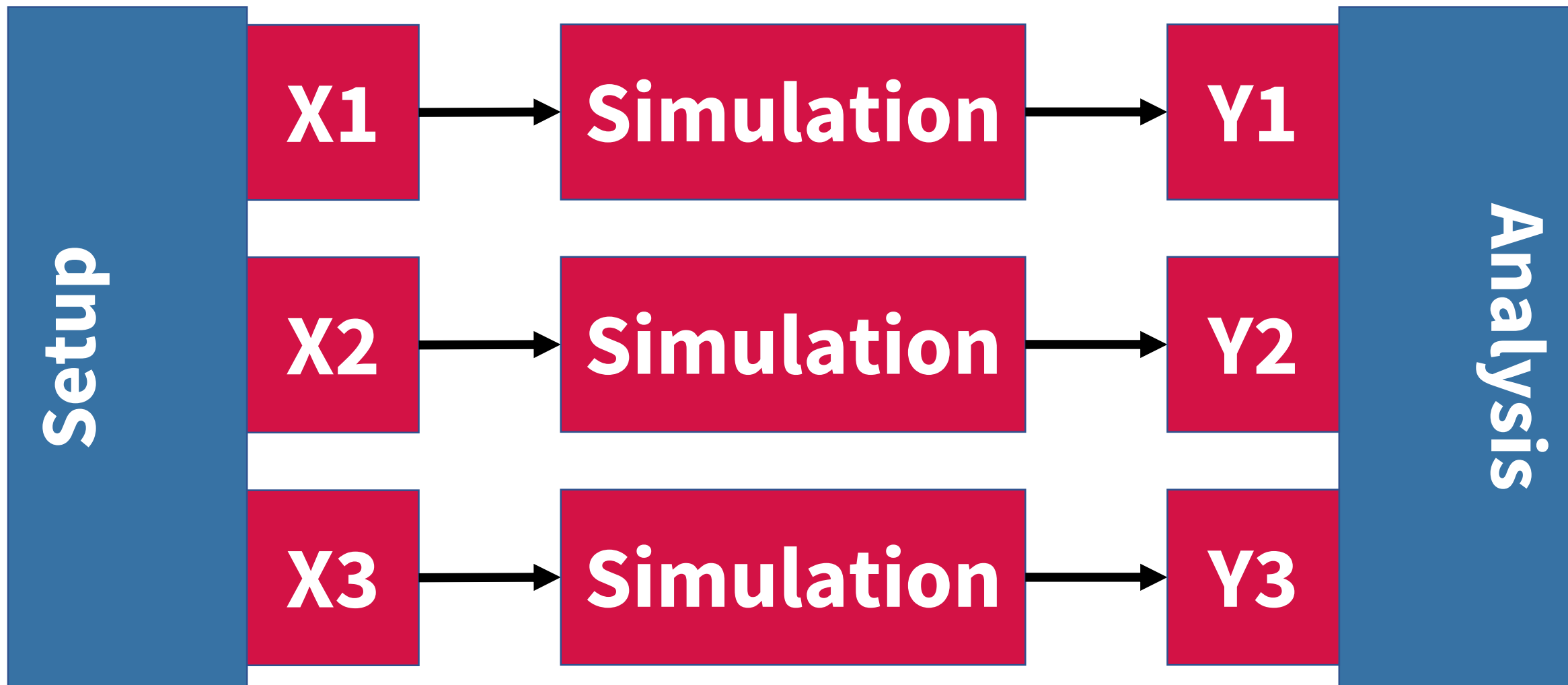
HTCondor

CENTER FOR HIGH THROUGHPUT COMPUTING

Common Problems in Scientific Computing

What happens to Y as we change X?
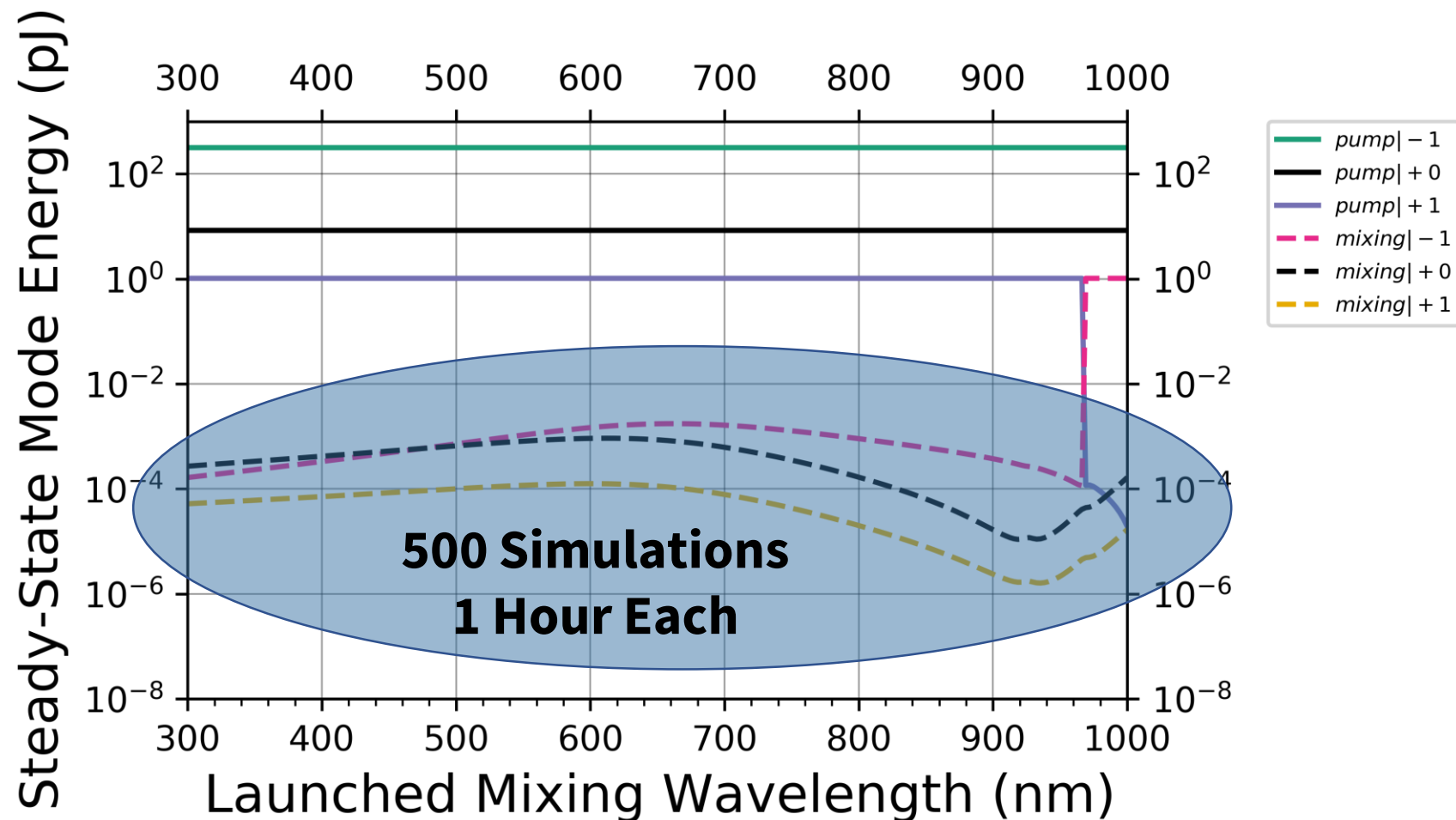
What happens to Y as we change X?

```
X = [0, 1, 2, …]

Y = map(simulation, X)

make_plot(X, Y)
```

HTMap is a

**Pure-Python,
Seamless,
Lightweight,
Focused**

HTCondor
Job Submitter & Manager

Who is HTMap for?

Users

- Has a working computation written in **Python**
- Knows Scientific Python, but not necessarily **anything else**
- **Wants** to use high-throughput computing… but is **very busy**

Facilitators

- "Well, it works on **my laptop**…"
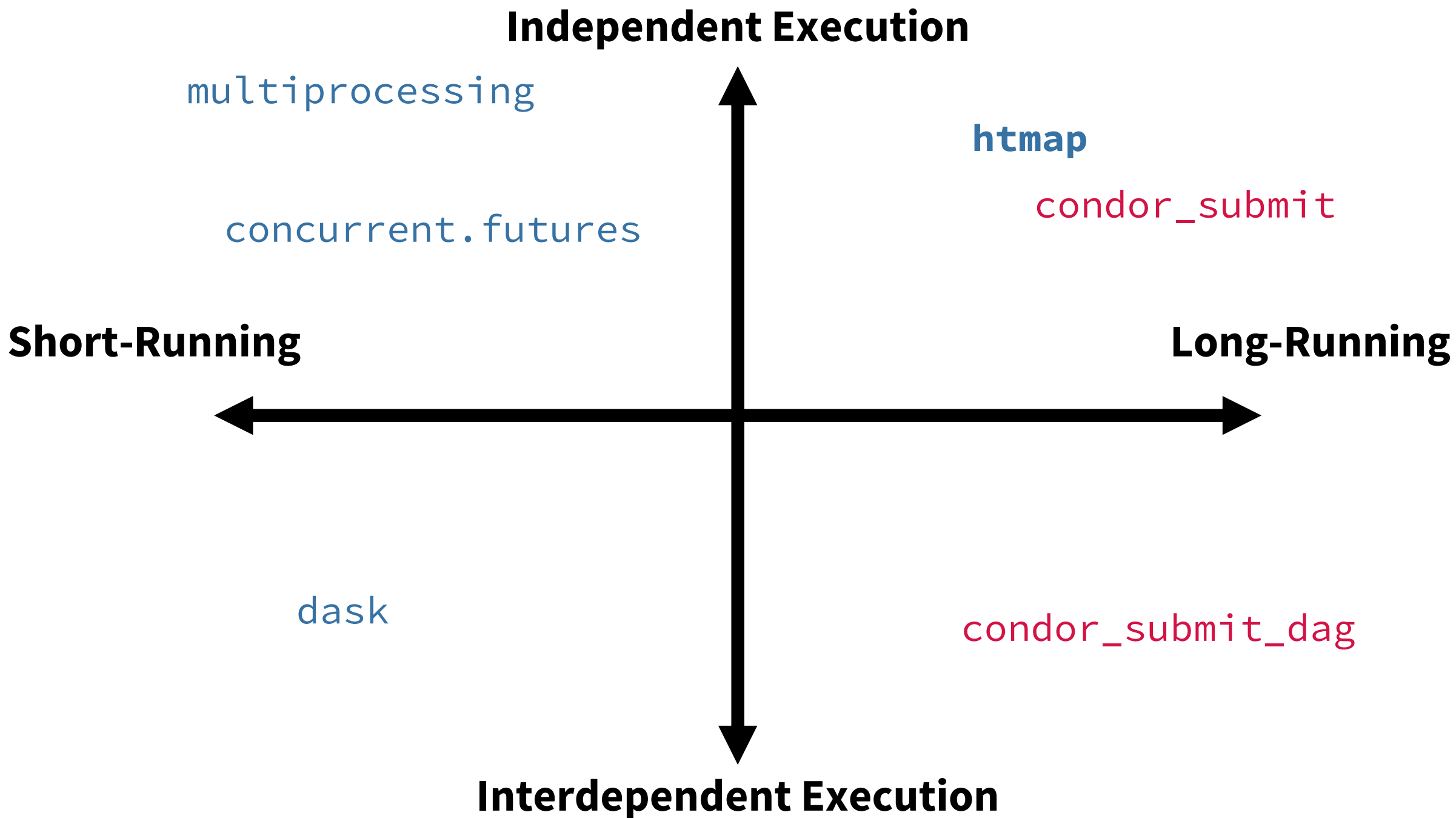- Users have **similar workflows**, but **dissimilar skills**

Who is HTMap **NOT** for?

"The output of my analysis is a file"

"My function takes a millisecond to run"

"But I don't use Python..."

Independent Execution

multiprocessing

htmap

concurrent.futures

condor_submit

Short-Running

Long-Running

dask

condor_submit_dag

Interdependent Execution

HTMap
https://github.com/htcondor/htmap

Slides and Code
https://github.com/JoshKarpel/htcondor-week-htmap-talk