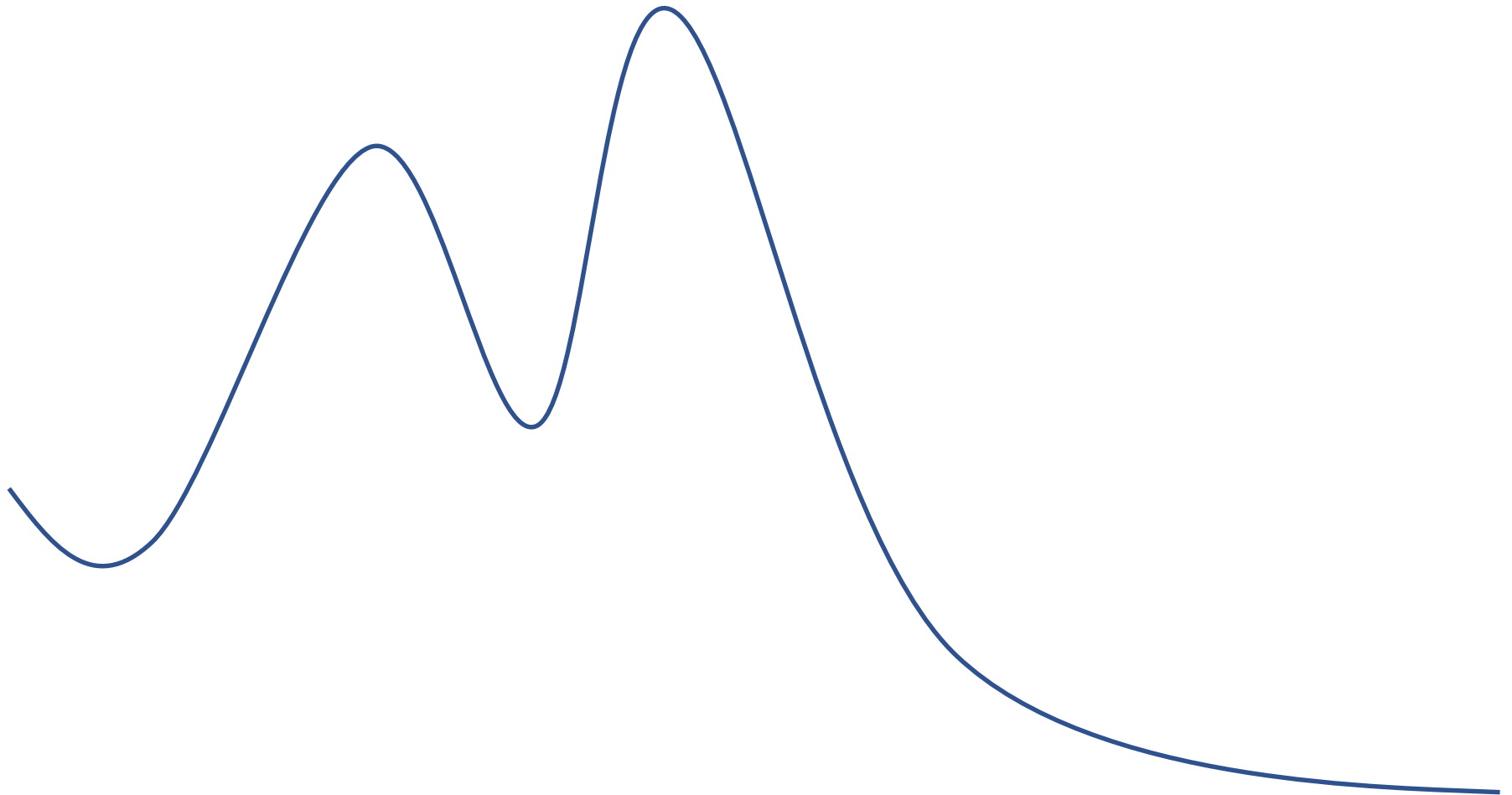


10 Health Benefits of Celery



Lowers Inflammation
Protects Liver Health
Benefits for Weight Loss
Prevents or Treats High Blood Pressure
Helps Lower High Cholesterol
Helps Prevent Ulcers
Boosts Digestion and Reduces Bloating
Contains Anti-Microbial Properties that Fight Infections
Helps Prevent Urinary Tract Infections
May Help Protect from Cancer

My Blood Pressure Over the Past 6 Years





Parallel Python

Distributing Monte Carlo with Celery



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What I do when I don't talk about Celery

Partner and Consultant at Zoomer Analytics LLC

Best known for xlwings, an open-source Python package for Excel

We help asset managers, hedge funds and banks get their Python infrastructure in place

We have tons of Celery experience for critical jobs, such as:

- Market data feeds from external vendors
- Order routing via EMSX
- Distribute expensive algorithmic trading strategies computation

I blog at distributedpython.com

In my former life I worked at UBS in Commodity Index trading

What is this talk about?

This talk is not about how awesome Celery is (it isn't anyway).
This talk is not about Monte Carlo algorithms.

This talk is about what problem(s) Celery solves .
This talk is primarily technical.
This talk is about building concurrent applications in Python.
This talk is about managing long-running Python tasks.
This talk is about infrastructure.

Agenda

Roll up your sleeves, this is a hands-on talk (no live coding, promised)
Pricing a fixed-strike Asian Call: $C = \max(A(0, T), K)$ with Monte Carlo
All about: How can we make this faster throwing more resources at it?
Threading, the Python GIL and multiprocessing
Celery, other task queues and Dask
Celery workflows with chains, groups and chords
Monitoring
Scaling

Celery, other task queues and Dask

Task queues are used as a mechanism to distribute work across threads, processes or machines

Give you a lot of architectural flexibility and scales out-of-the-box

Python task schedulers: Celery, huey, RQ (Redis Queue)

Task scheduling means Python library plus “some infrastructure”

Celery is the standard Python task queue

- Designed to process vast amounts of messages
- Simple for simple use cases
- Dramatic complexity curve (lots of features)
- A lot of complexity is in its configuration
- Task chaining primitives to model complex workflows
- Task routing features

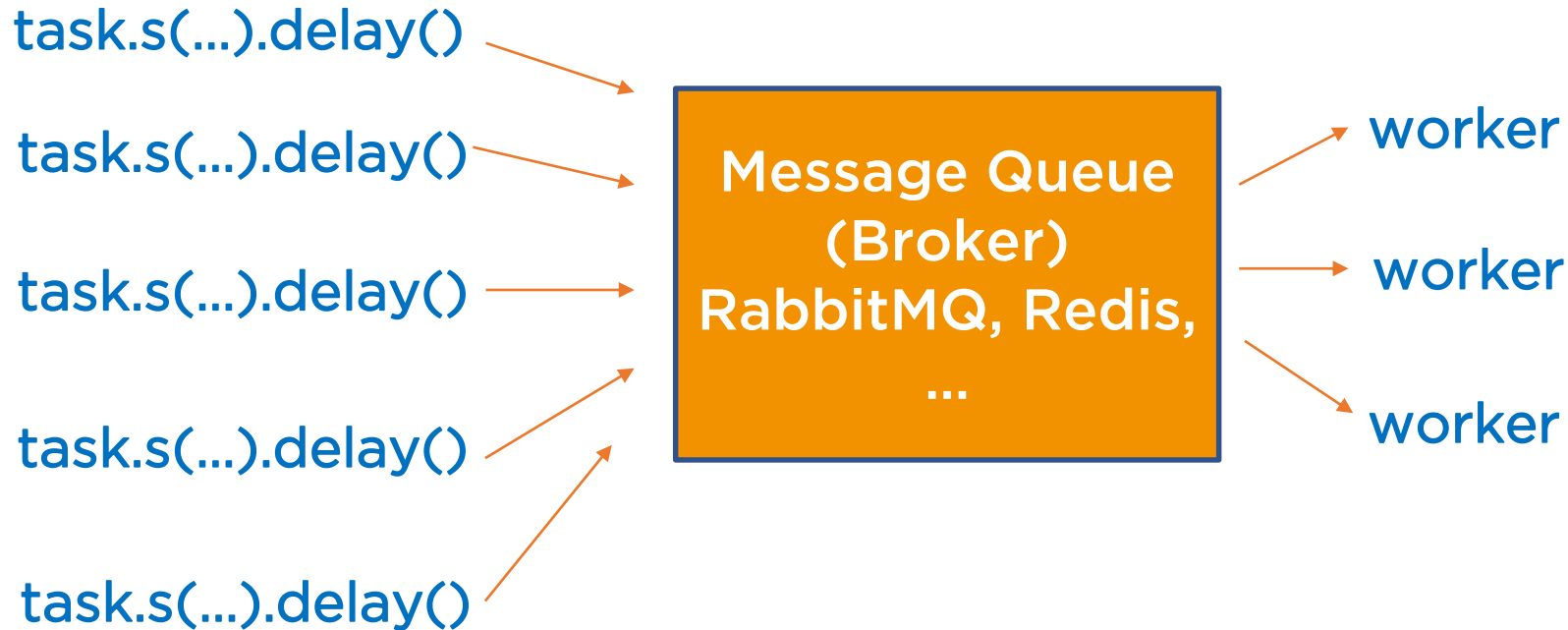
Dask on the other hand is for parallel analytics (think NumPy arrays or Pandas dataframes larger than memory)

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Celery Building Blocks



The absolute minimum to get started:

- `pip install celery`
- And a message broker (though you can just use the filesystem to play around with it)

Thank You

Always happy to help, just get in touch

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