



Mage &



DTC Zoomcamp



Making Orchestration Magical with Mage



A bit about me...



Previously

- Analytics engineering
- Product analytics
- Data engineering

Storyblocks 

AllTrails 

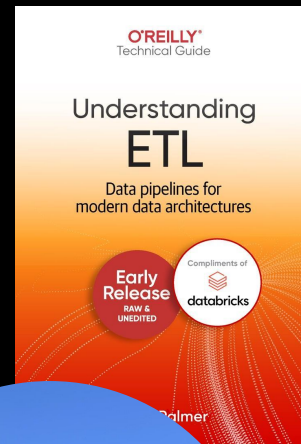
Underline 




Now

- DevRel (& other stuff)


Mage 





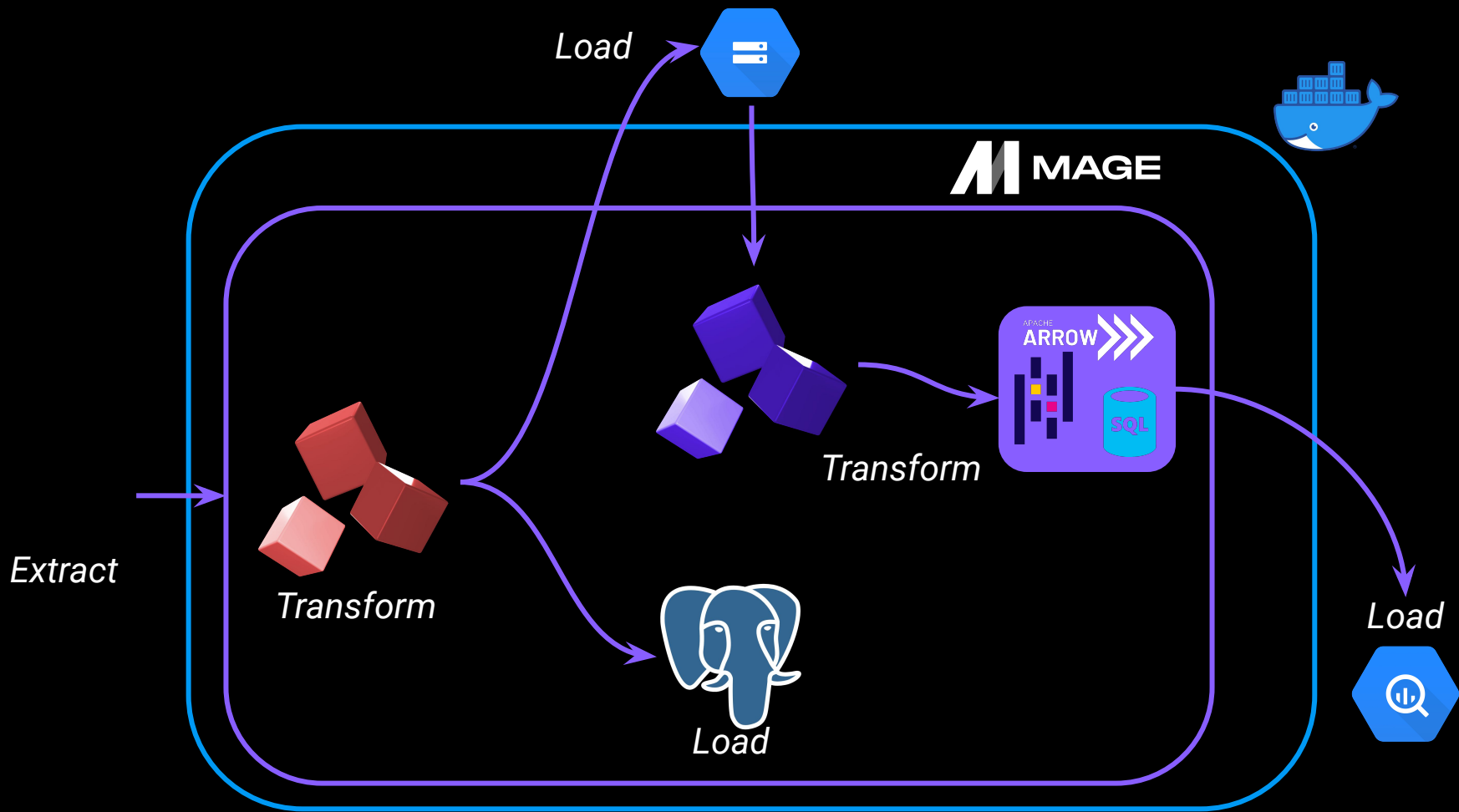
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What will we build?





Architecture

Extract

Pull data from a source (API— [NYC taxi dataset](#))

Transform

Data cleaning, transformation, and partitioning.

Load

API to Mage, Mage to Postgres, GCS, BigQuery.



What is orchestration?



What is Orchestration?

A large part of data engineering is **extracting, transforming, and loading** data between sources.

Orchestration is a process of dependency management, facilitated through **automation**.

The data orchestrator manages scheduling, triggering, monitoring, and even resource allocation.



What is Orchestration?

👉 Every workflow requires sequential steps.

☕ A French press with cold water will only brew disappointment

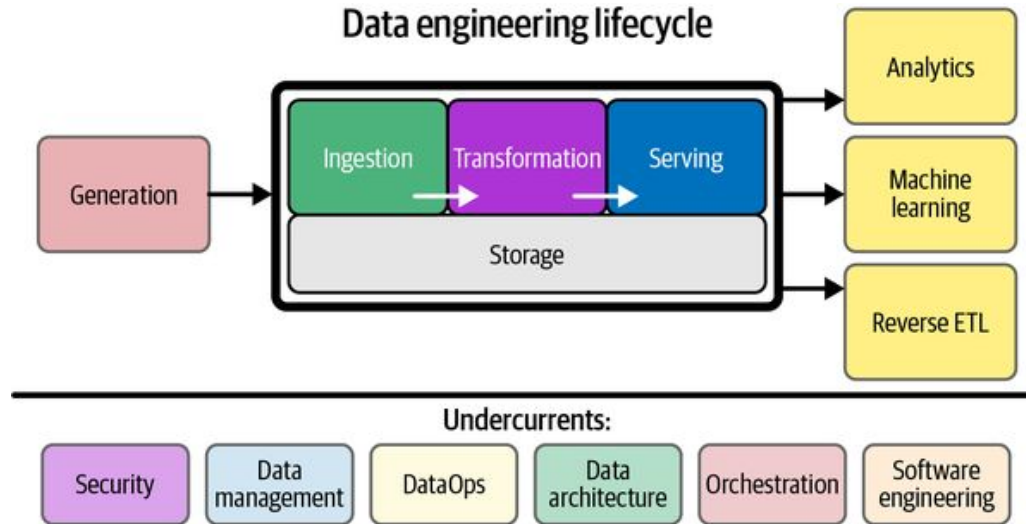
☔ Poorly sequenced transformations brew a storm far more bitter.

📖 Steps = tasks

🔄 Workflows = DAGs (directed acyclic graphs)



What is Orchestration?



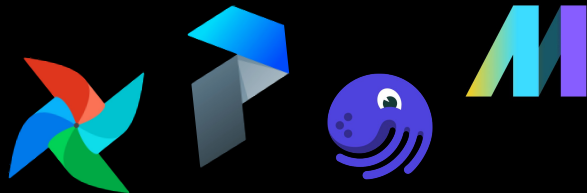


What does a *good*
solution look like?



A good orchestrator handles...

- Workflow management
- Automation
- Error handling
- Recovery
- Monitoring, alerting
- Resource optimization
- Observability
- Debugging
- Compliance/Auditing

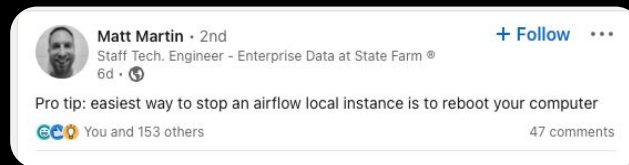
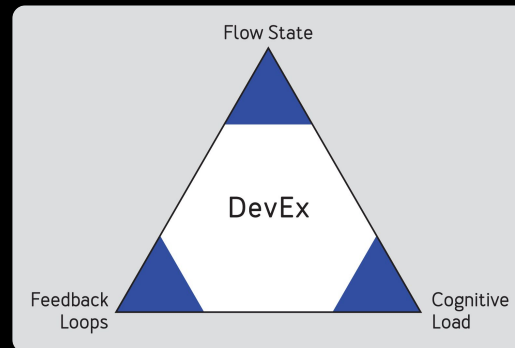




A good orchestrator prioritizes....

The *developer experience*

- Flow state 🌊
 - *"I need to switch between 7 tools/services."*
- Feedback Loops 🔄
 - *"I spent 5 hours locally testing this DAG."*
- Cognitive Load 🧱
 - How much do you need to know to do your job?





An analogy

An orchestrator is like...





Up next: What is Mage?
