Bootcamp
Bringing ML Models into Production
Lesson 2: Batch

pyladies amsterdam

DEXTER

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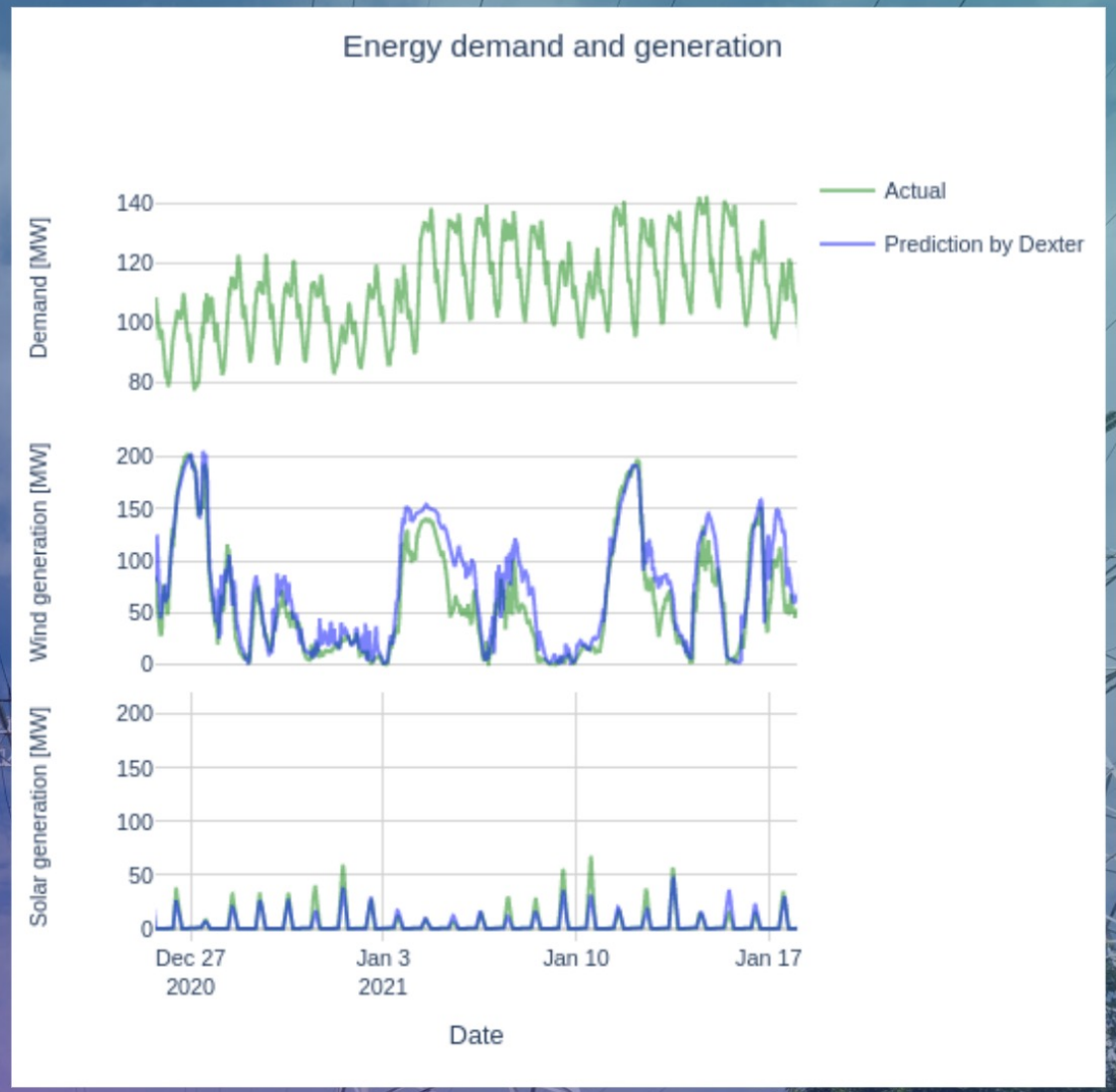
Agenda

- Recap
- Deployment setup
- Batch inference on Azure
- Exercises & Home assignment

Recap



Dexter-Pyladies energy case

To prevent blackouts energy generation & demand have to be matched:

- The solar & wind forecast you can acquire from an external company
- Can you deploy a energy demand prediction model to solve the problem of Pytown?

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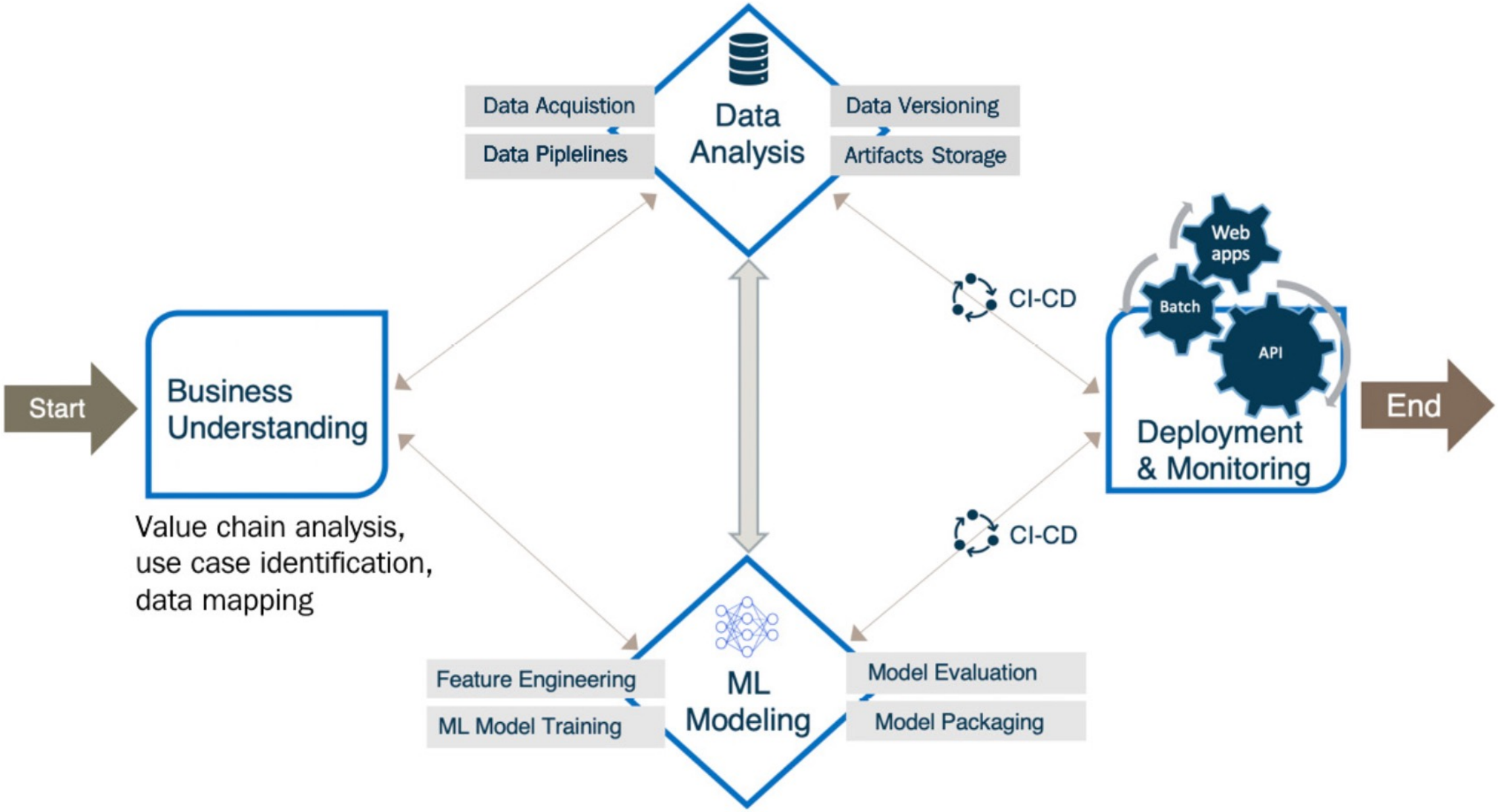
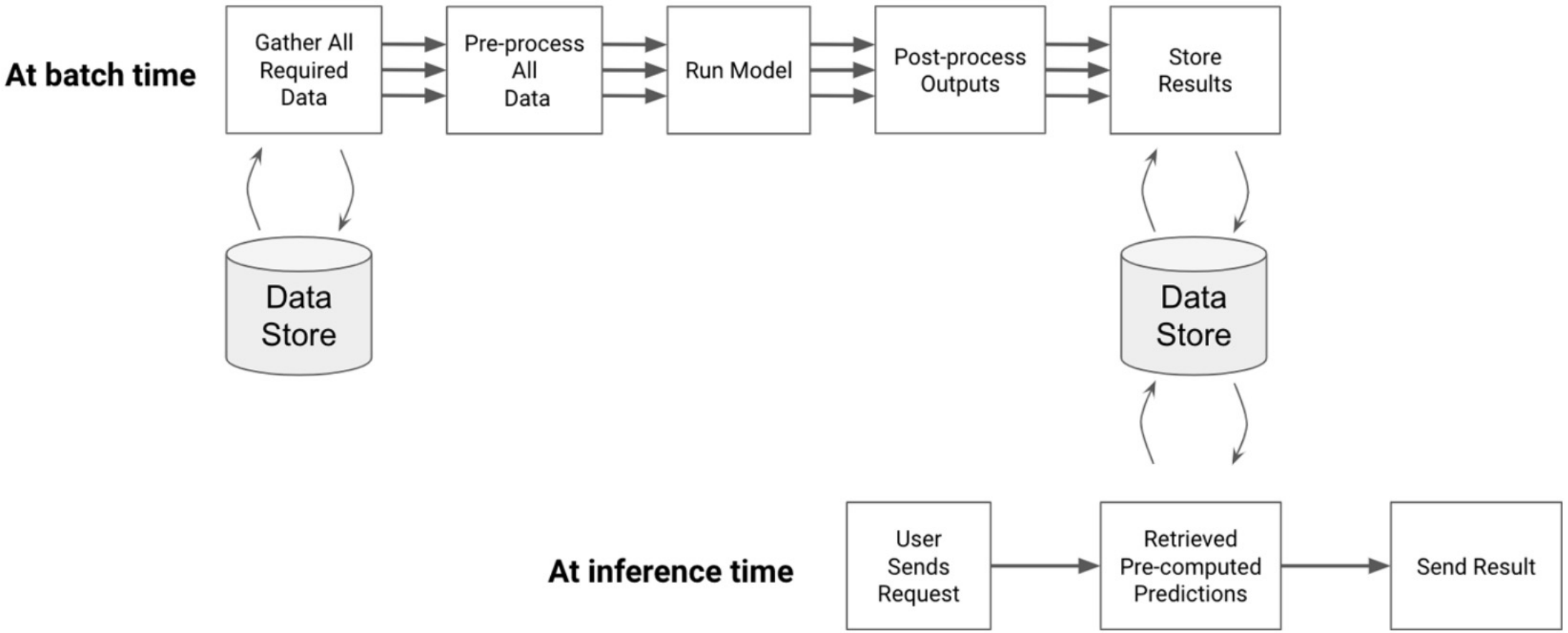
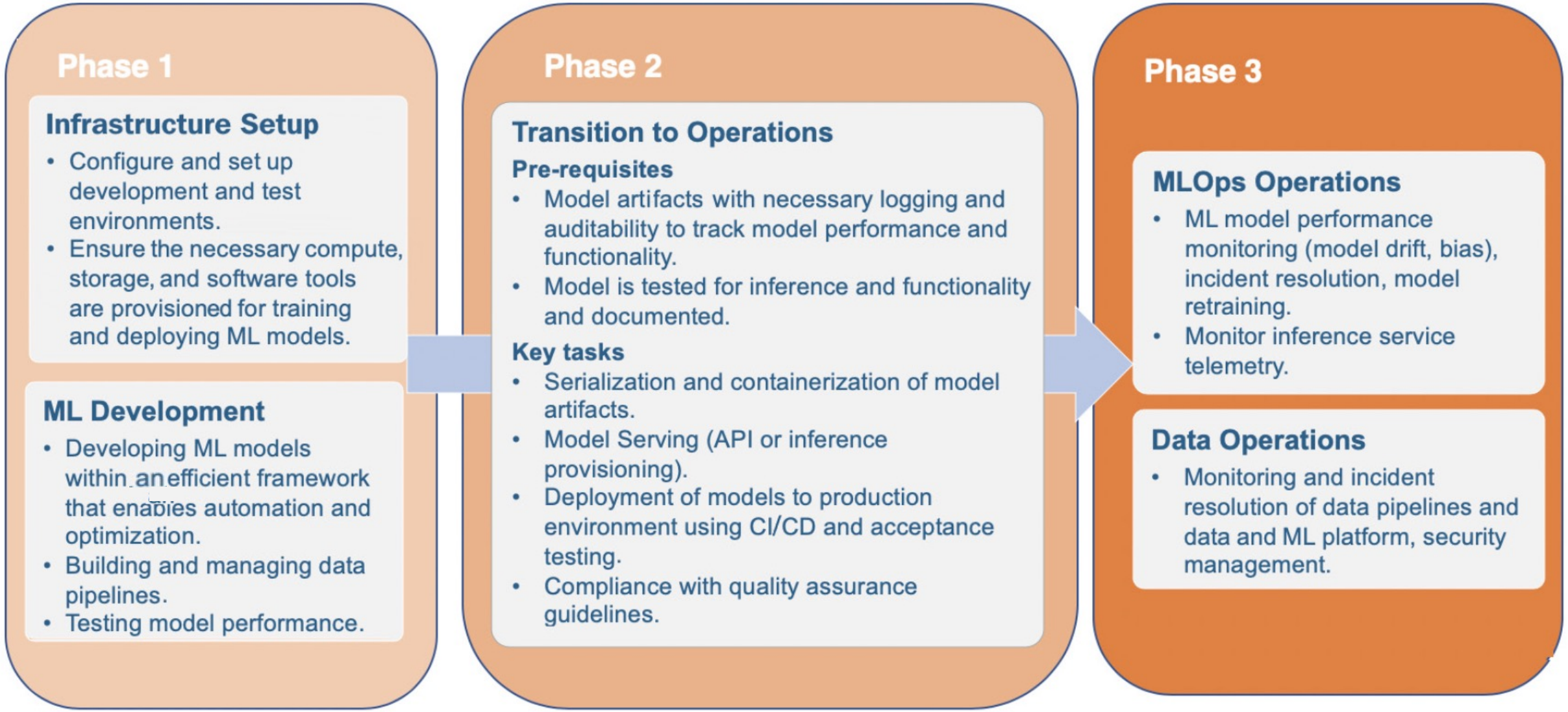


Source: Emmanuel Raj. Engineering MLOps. Chapter 2. Figure 2.1 – ML solution development process

Batch Workflow



Source: Emmanuel Ameisen. Building Machine Learning Powered Applications. Chapter 9. Figure 9-3. Example of batch workflow



Source: Emmanuel Raj. Engineering MLOps. Chapter 2. Figure 2.10 – Implementation roadmap for an MLOps-based solution

Deployment setup

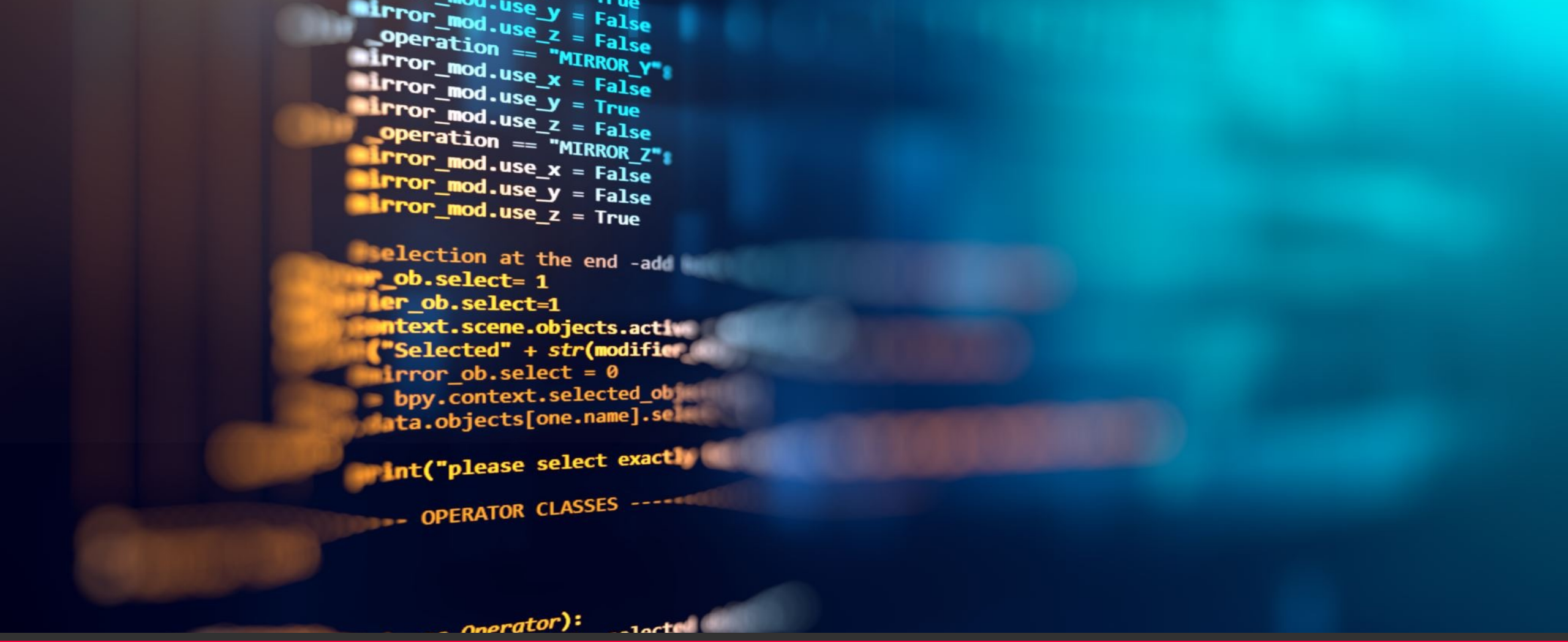
Steps

- Prerequisites
- Data preparations (EDA locally, datasets registration - on Azure)
- Model training (locally, experiment tracking - on Azure)
- Model evaluation and registration (locally, experiment tracking and registration - on Azure)

Tips

Never hardcode secrets in your code

- For local dev – use .env (add it to .gitignore)
- For cloud dev such as Azure use Azure Key Vault



Batch inference on Azure

Steps

- Prepare files for batch inference
- Setup and schedule Azure Machine Learning Pipeline:
  - provision inference compute
  - prepare score.py script
  - prepare conda inferencing env
  - create a pipeline
  - publish pipeline
  - schedule pipeline

Exercises & Home assignment

Exercises & Home assignment – Lesson 2

https://github.com/pyladiesams/bootcamp-bringing-ML-models-into-production-intermediary-jun-aug2021/blob/master/bootcamp/lesson2/lesson2_tasks.md

print(f“{user_name} thanks for watching”)