# Docker Refresher

1. Overview

* A software platform that allows you to build, test, and deploy apps quickly
* Docker packages software into standardized units called containers that have everything the software needs to run (incl. libraries, system tools, code and runtime)

1. Images and containers

* Images
* Contain files and metadata
* Not running processes
* Containers
* Are created from images
* Are running processes

1. Docker vs virtual machines
2. Dockerfile

# The value of docker & containers

1. Why use Docker?

* Software systems
* Standardization – build once, run anywhere
* CI efficiency -
* Maintainability – Less time spent on setting environment
* Isolation – Process isolation
* Security
* Scalability
* Business
* Cost reduction
* Compatibility: AWS EC2

1. Why Docker for ML systems?

* Reproducibility
* Scalability
* Compatibility

# Container deployment process

1. Previous section (7)
2. Section 8 – Deployment with Docker

* CircleCI -> Publish Docker Image -> Railway
* CircleCI: Model training -> Artifacts -> Deployments
* Railway: Railway Container registry -> Docker run -> restart updated container