Accelerating development velocity of production ML systems using docker
Pinterest is the visual discovery engine.

Mission
Help people discover and do what they love.
Interest-based feed
Recommendations
Search
Ads
Visual Discovery
Monolith to Microservices
Microservices
Challenges with Microservices
Model training

1. **Train models**
2. **Evaluate models**
3. **A/B test**
4. **Rollout**

**Generate hypotheses**

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**Model training**
Solutions?
What is...
1. Bundle applications with its runtime environment

2. Similar to a virtual machine

3. Runs on its own network interface
Single Container Docker Workflow

Dockerfile → build → Docker Image → run → Docker Container
# Docker file

Refer [https://docs.docker.com/engine/userguide/eng-image/dockerfile_best-practices/](https://docs.docker.com/engine/userguide/eng-image/dockerfile_best-practices/)

# for best practices maintaining this file.

# This file is used to build docker images for development purposes only.

# This file cannot be used to build docker images on production.

FROM 998131032990.dkr.ecr.us-east-1.amazonaws.com/oracle-java8:latest

# Default environment variables required to run service, can be overridden by docker run
ENV CONFIG_FILE=config/instantpfy.test.properties
    HEAP_SIZE=4G
    LOG4J_CONFIG_FILE=config/log4j_instantpfy.xml
    NEW_SIZE=2G

# Create and set current directory
WORKDIR /opt/fantasio

# Add the build artifact under /opt, can be overridden by docker build
ARG ARTIFACT_PATH=target/fantasio-0.1-SNAPSHOT-bin.tar.gz
ADD $ARTIFACT_PATH /opt/fantasio

# Default command to run service, do not override it in docker run unless have a good reason
# Use "docker logs ID" to view stdout and stderr
CMD ["scripts/run_in_container.sh"]
Connecting services
Docker file

Docker-compose file
Anything that can go wrong will go wrong, Edward Murphy
Docker commands

1. Inspect
2. Attach
3. Exec
4. Pause, Stop, Remove
5. Top
Software Engineering Daily Podcast

Docker for micro services, Apress