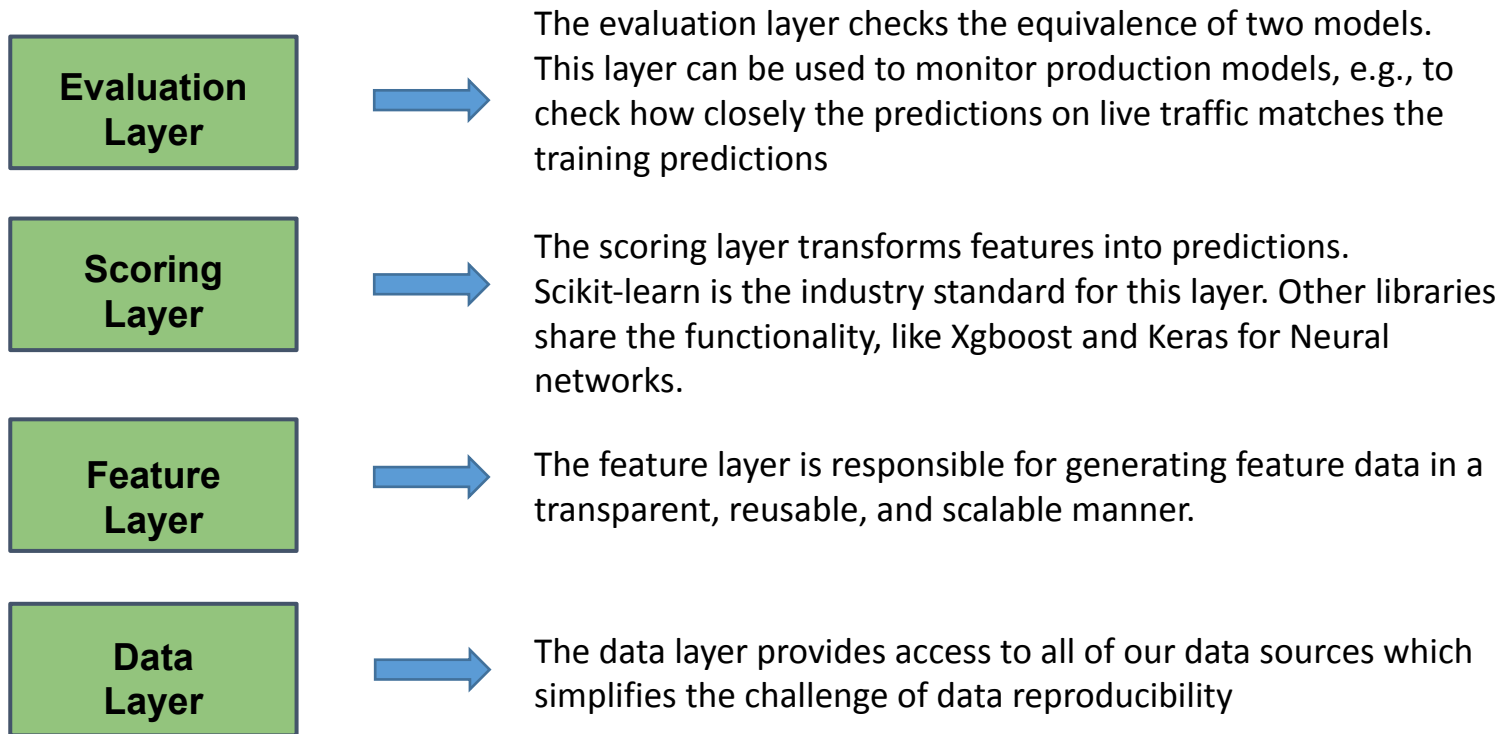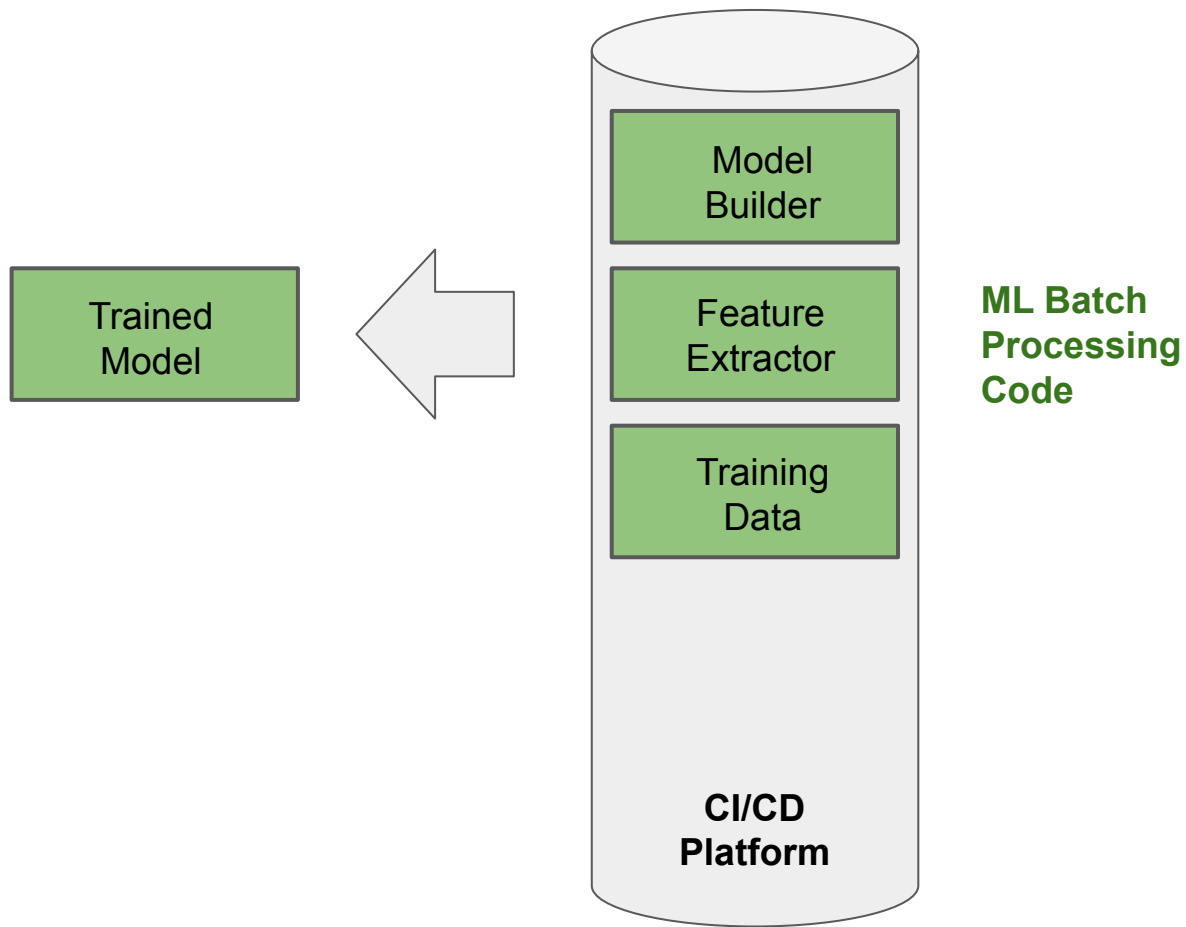# Architecture Component Breakdown

(ML model as embedded dependency, predict on the fly)
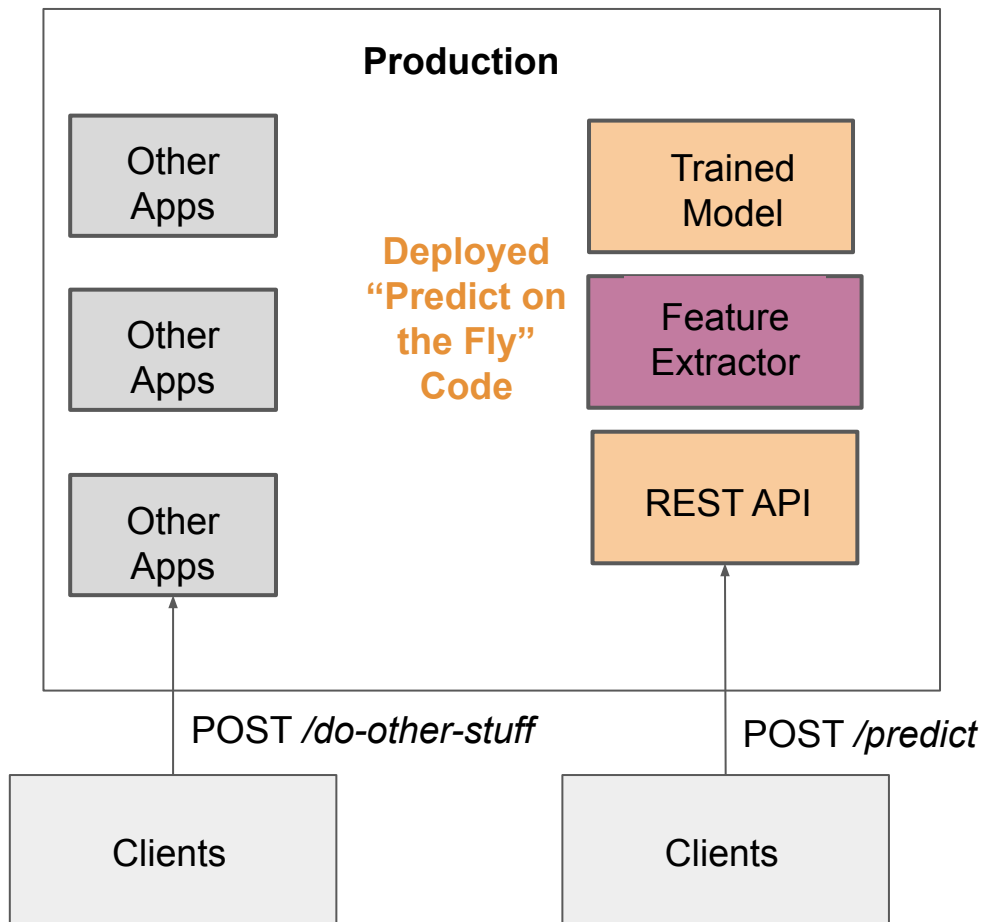
High Level Architecture

Evaluation Layer → The evaluation layer checks the equivalence of two models. This layer can be used to monitor production models, e.g., to check how closely the predictions on live traffic matches the training predictions

Scoring Layer → The scoring layer transforms features into predictions. Scikit-learn is the industry standard for this layer. Other libraries share the functionality, like Xgboost and Keras for Neural networks.

Feature Layer → The feature layer is responsible for generating feature data in a transparent, reusable, and scalable manner.

Data Layer → The data layer provides access to all of our data sources which simplifies the challenge of data reproducibility

Diagram taken from: Building a Reproducible Machine Learning Pipeline, Sugimura and Hartl

Breakdown: Training Phase

Model
Builder

Trained
Model

Feature
Extractor

**ML Batch
Processing
Code**

Training
Data

**CI/CD
Platform**
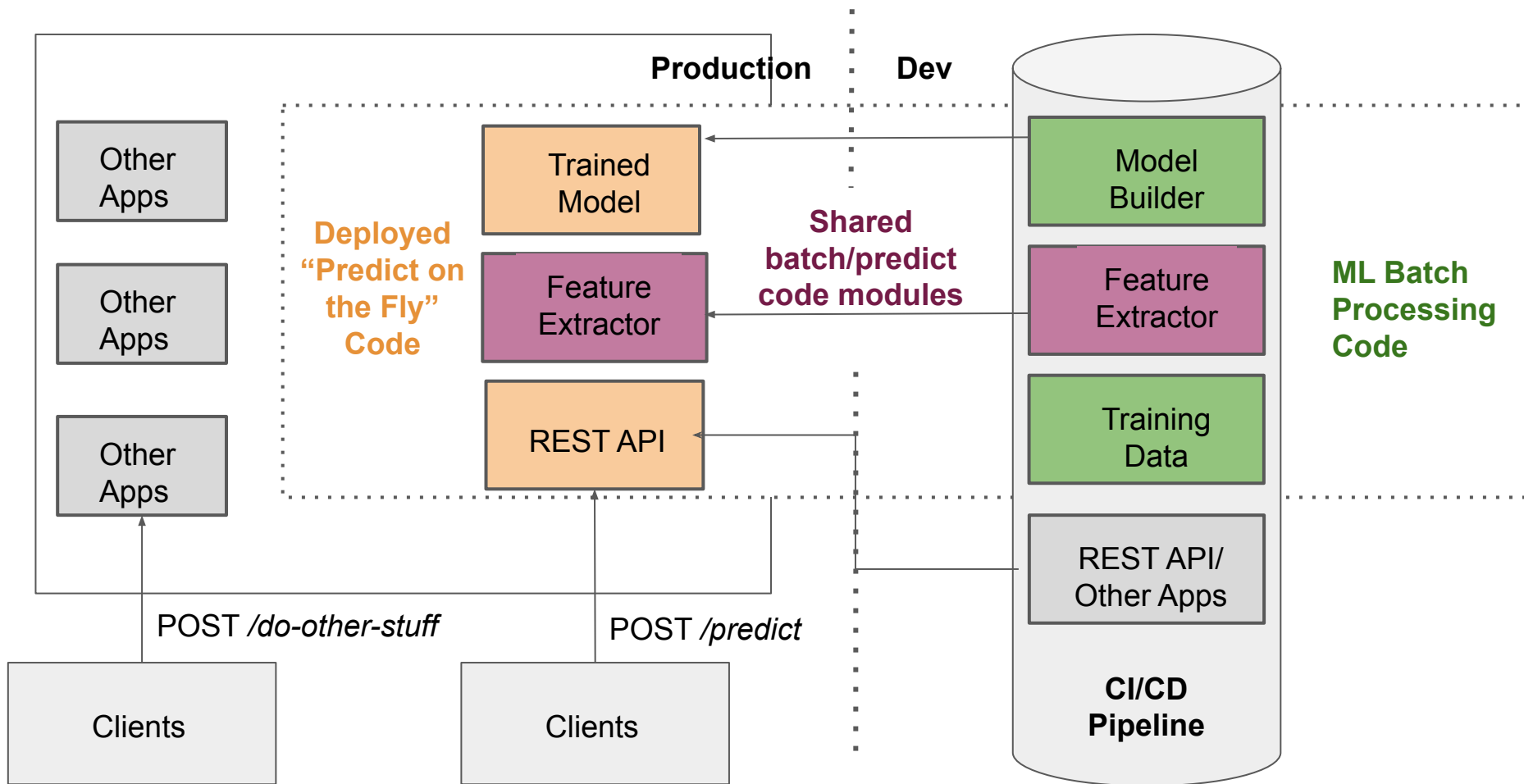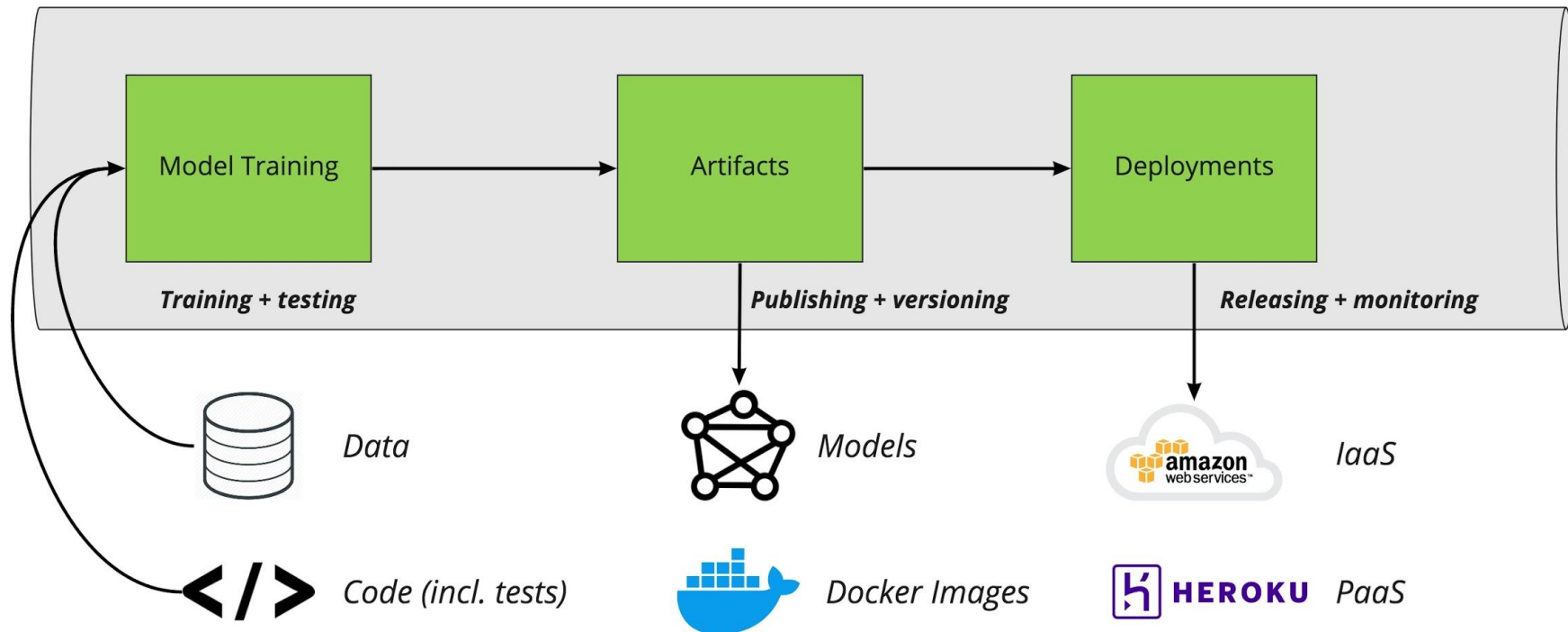
Breakdown: Prediction Phase

Diagram: Train by batch, predict on the fly, serve via REST API

CI/CD Automation of the Deployment

THANK YOU

I tweet about software engineering + build in public
@ChrisSamiullah