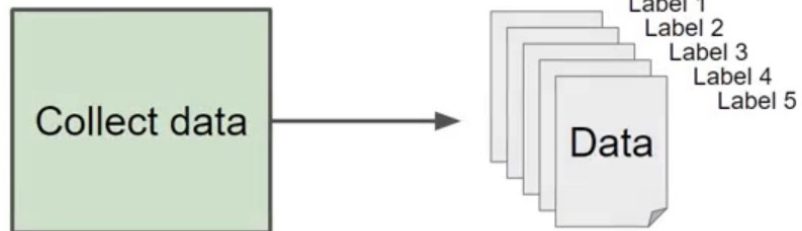
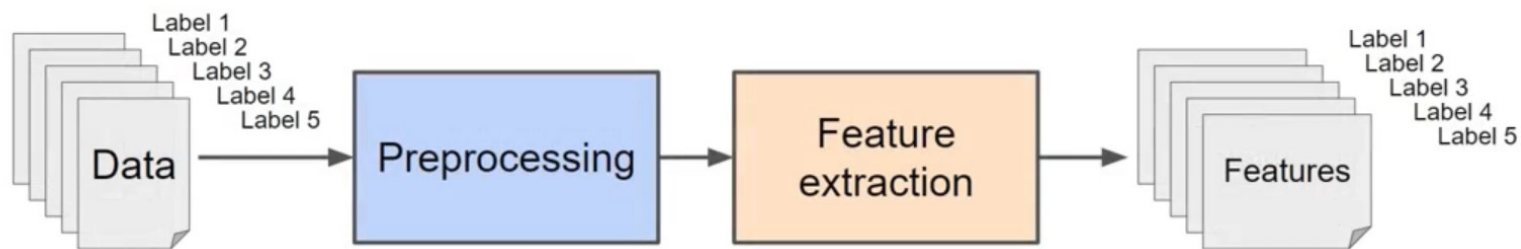
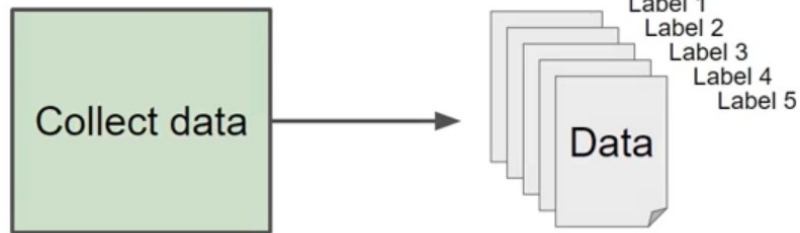
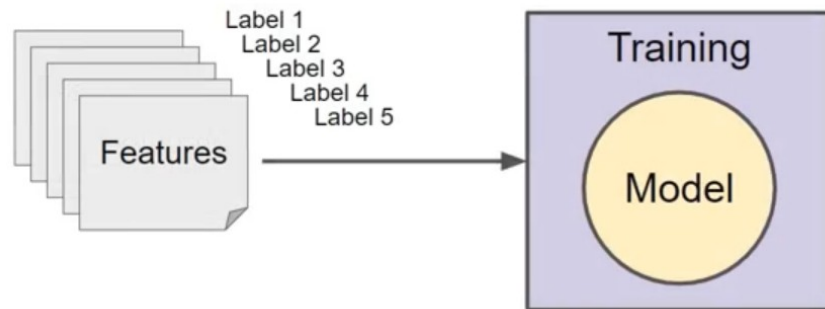
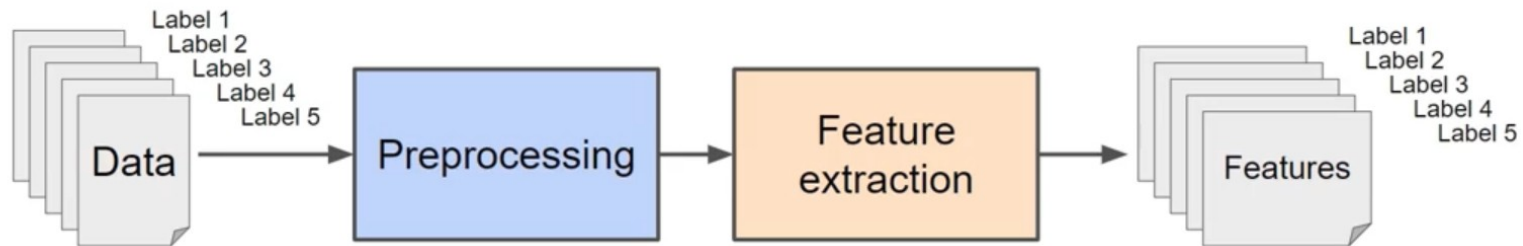
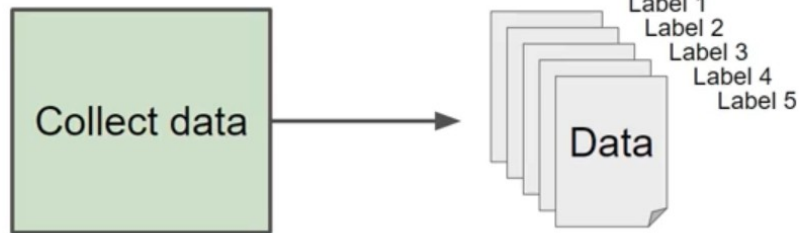
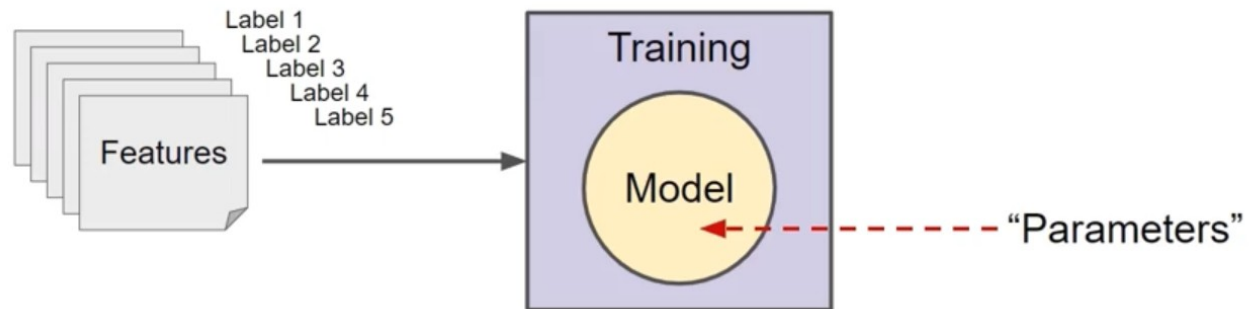
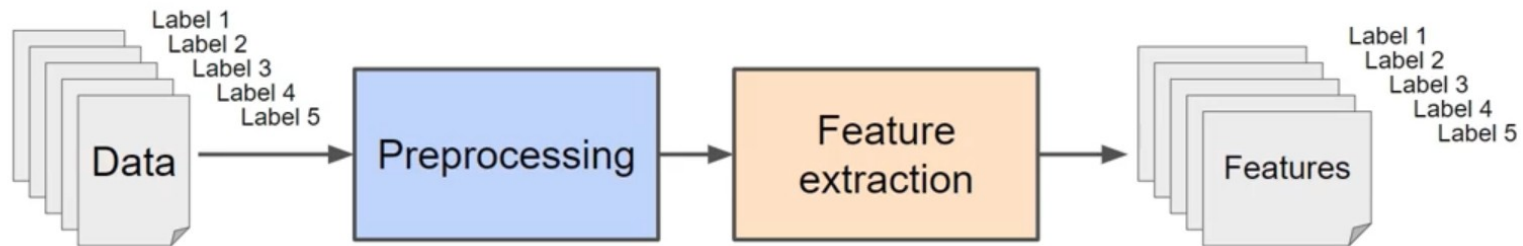
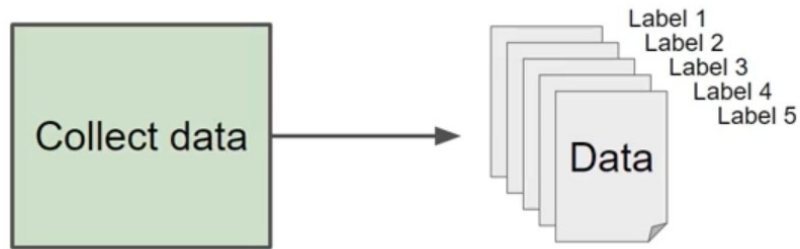


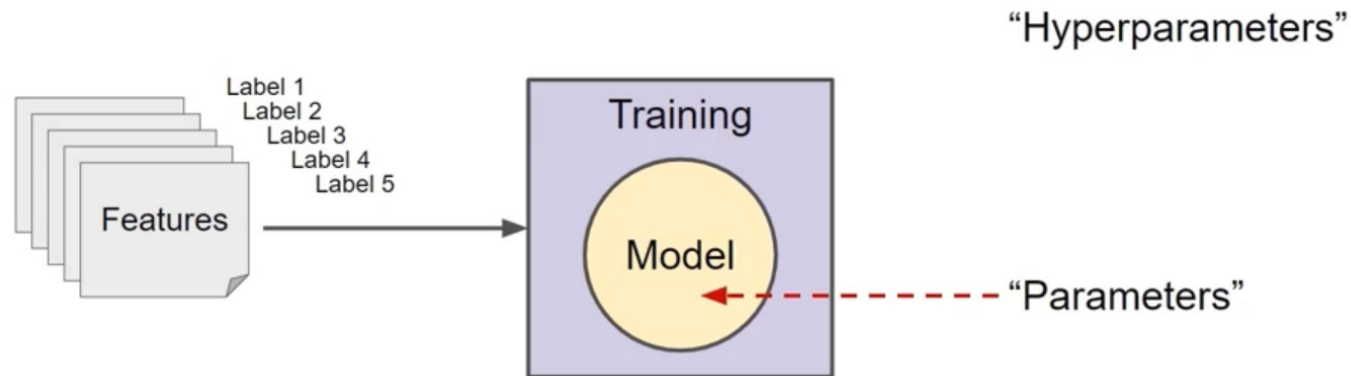
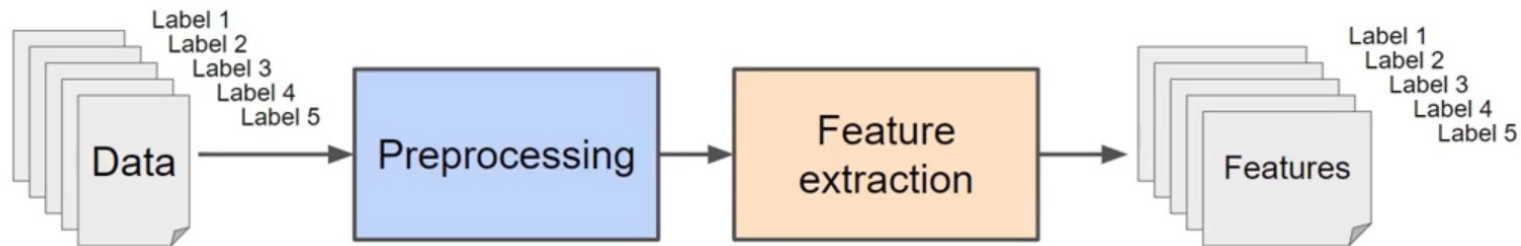
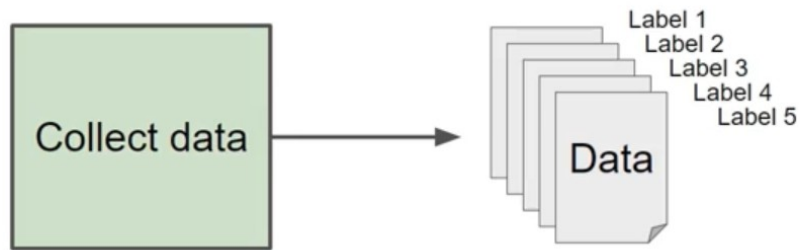
# Machine Learning Pipeline

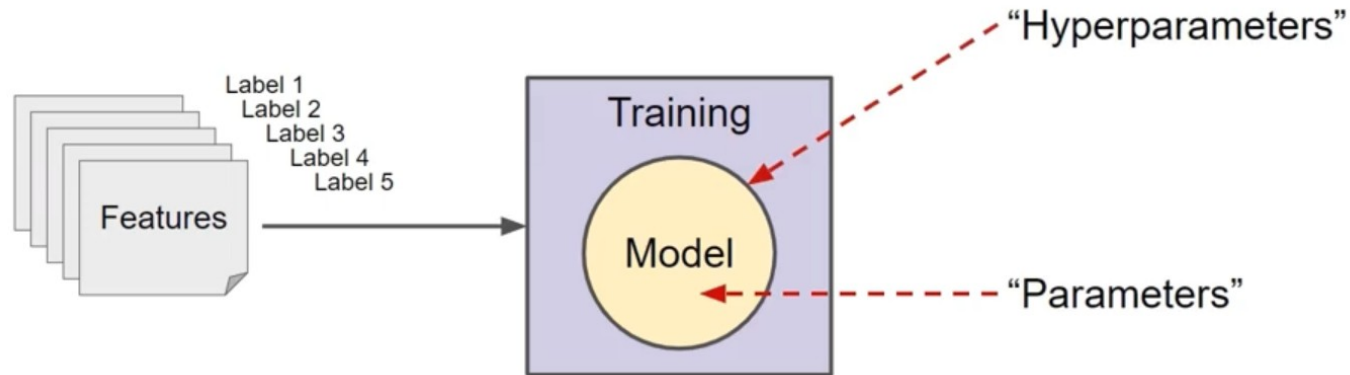
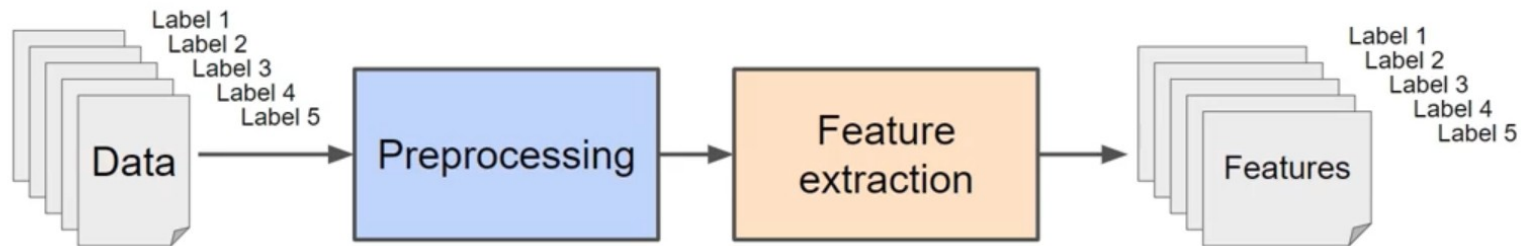
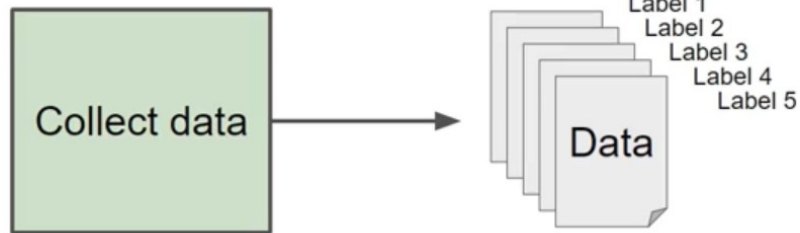


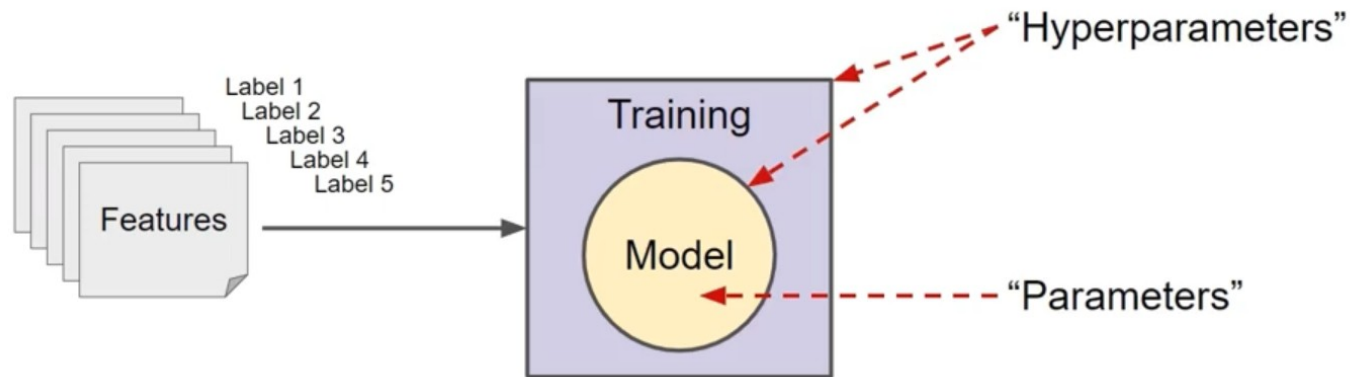
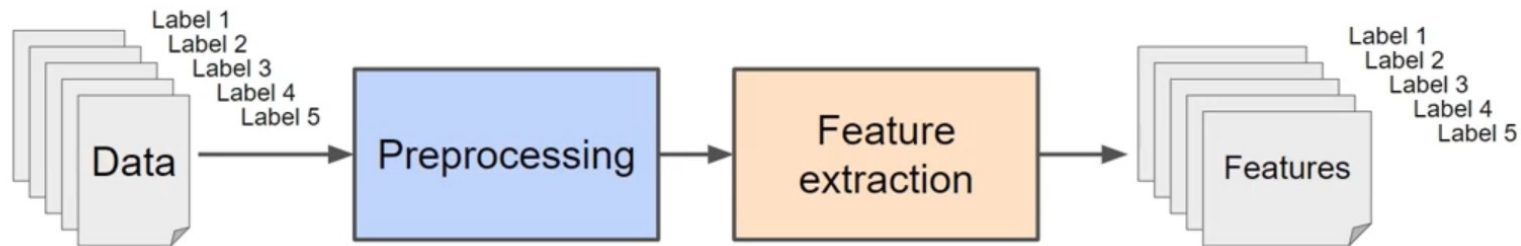
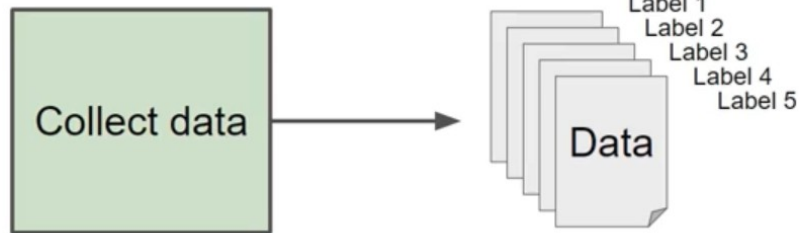




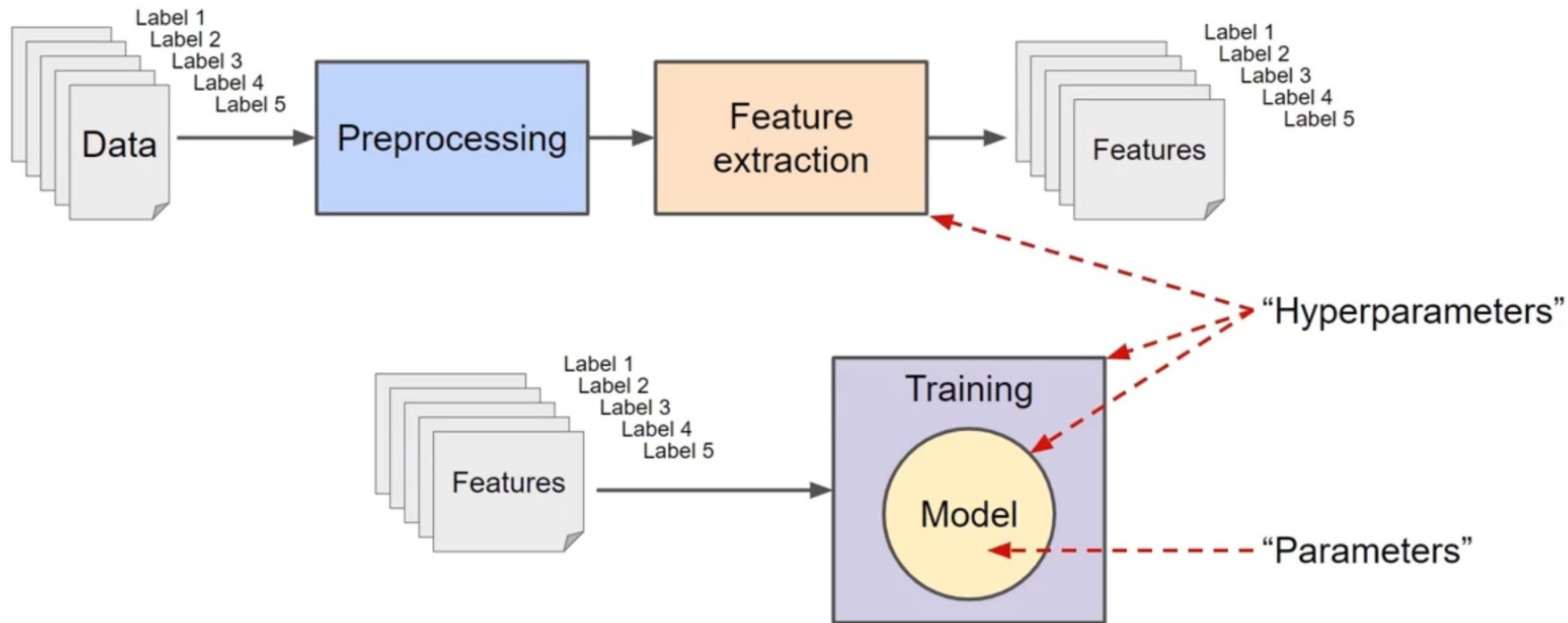
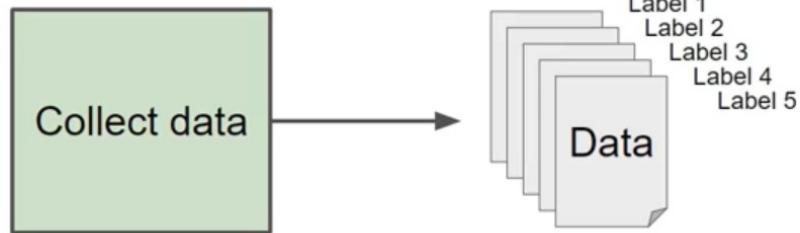


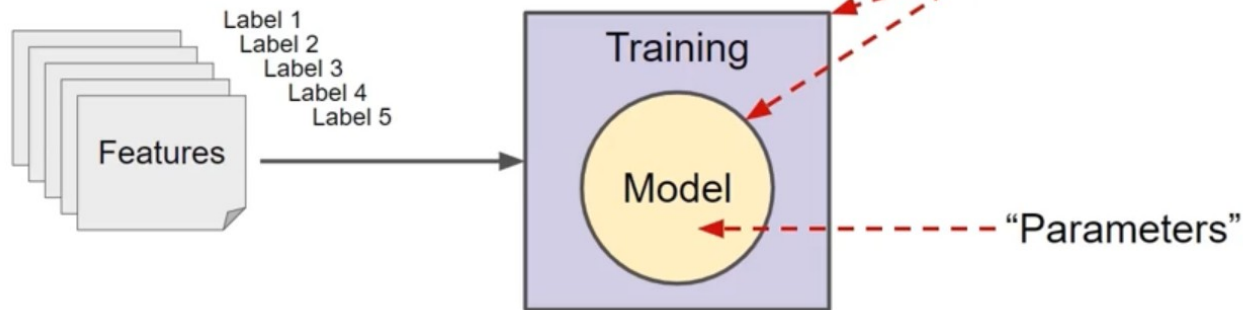
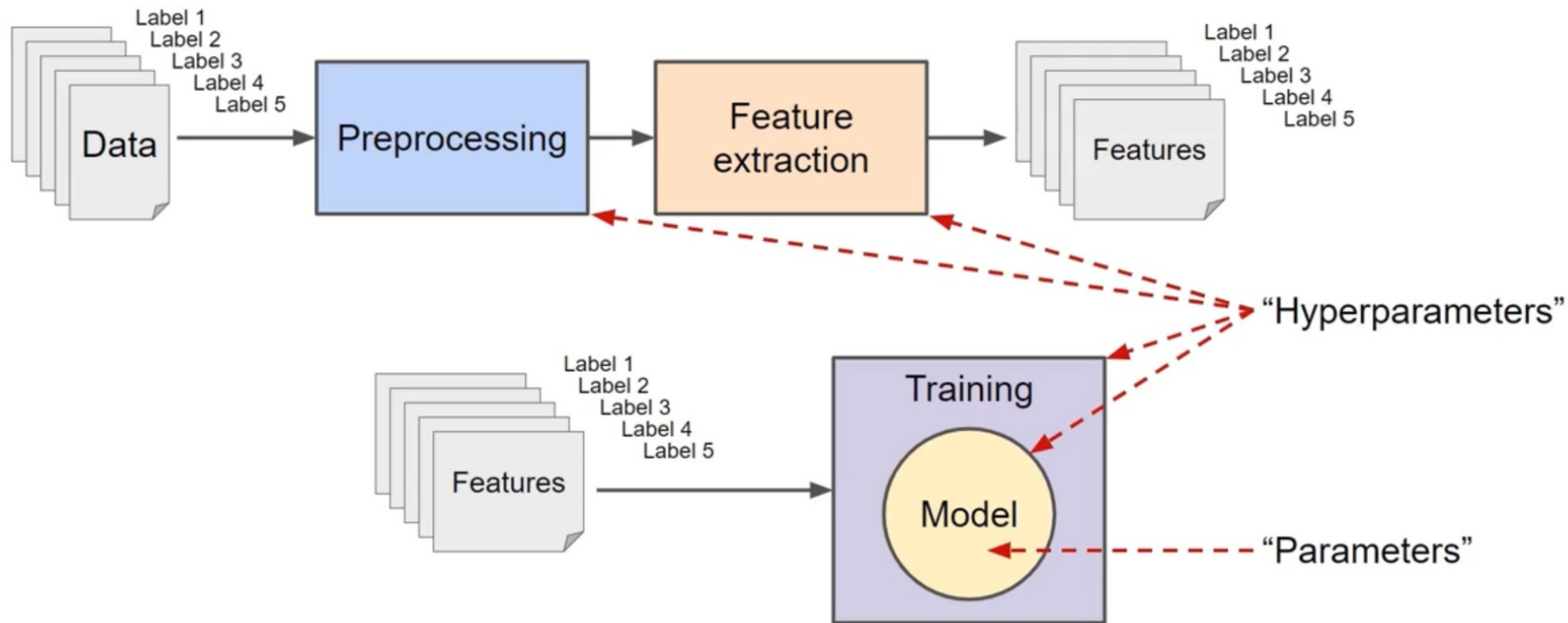
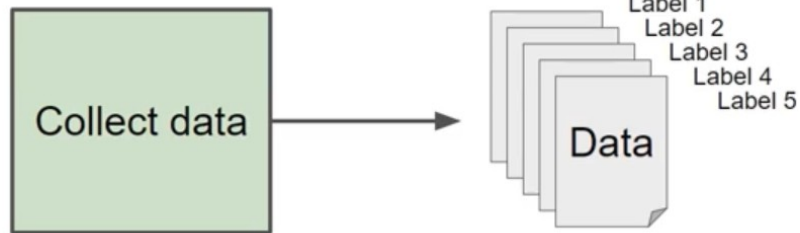








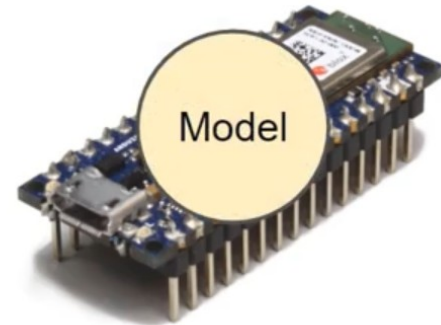


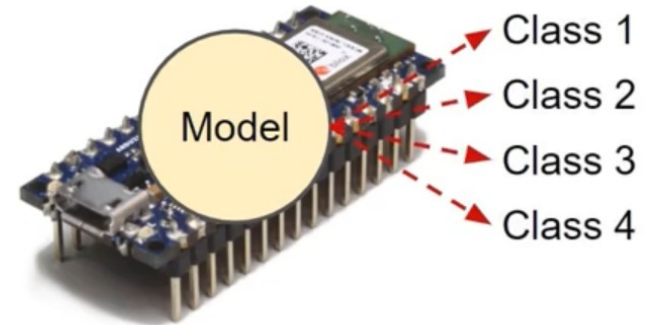


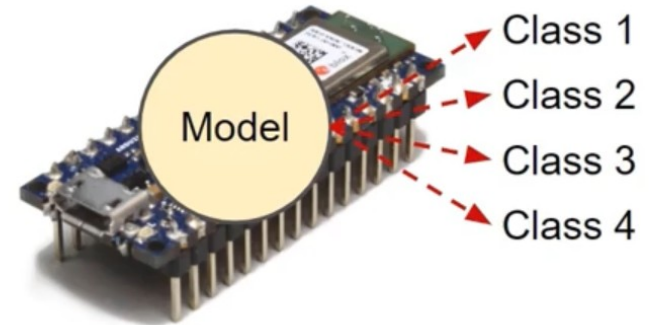
"Hyperparameters"

"Parameters"

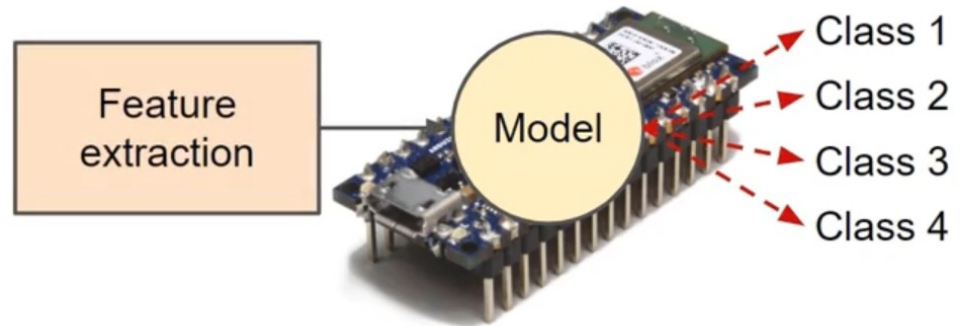




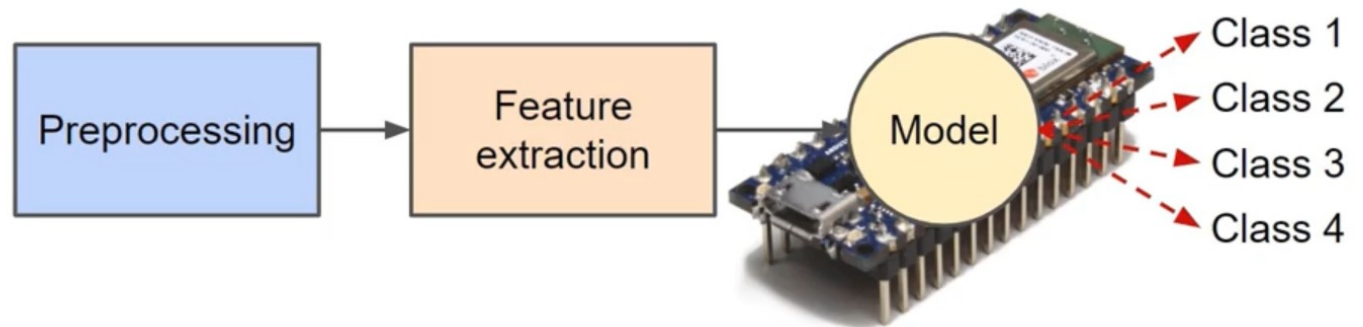




**Inference:** using the machine learning model to make predictions on unseen data in the wild

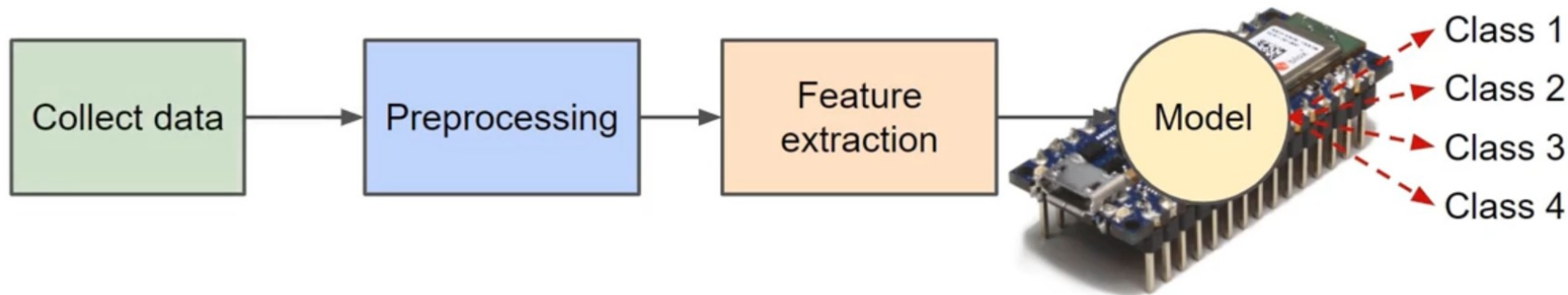


**Inference:** using the machine learning model to make predictions on unseen data in the wild



**Inference:** using the machine learning model to make predictions on unseen data in the wild





**Inference:** using the machine learning model to make predictions on unseen data in the wild

docs.edgeimpulse.com/reference#ingestion-api

☆ Tp U

EDGE IMPULSE

Home

ShawnHymel

API Reference

Search

DATA INGESTION

Ingestion service

Data acquisition format

C SDK Usage Guide

REMOTE MANAGEMENT

Remote management protocol

Serial protocol

INFERENCEING SDK

Inferenceing SDK

EDGE IMPULSE API

Edge Impulse API

Login

User

Projects

Devices

Raw data

Ingestion service

The ingestion service is used to send new device data to Edge Impulse. It's available on both HTTP and HTTPS endpoints, and requires an API key to authenticate. Data needs to be sent in the [Edge Impulse Data Acquisition format](#), and is optionally signed with an HMAC key. Data with invalid signatures will still show up in the studio, but will be marked as such, and can be excluded from training.

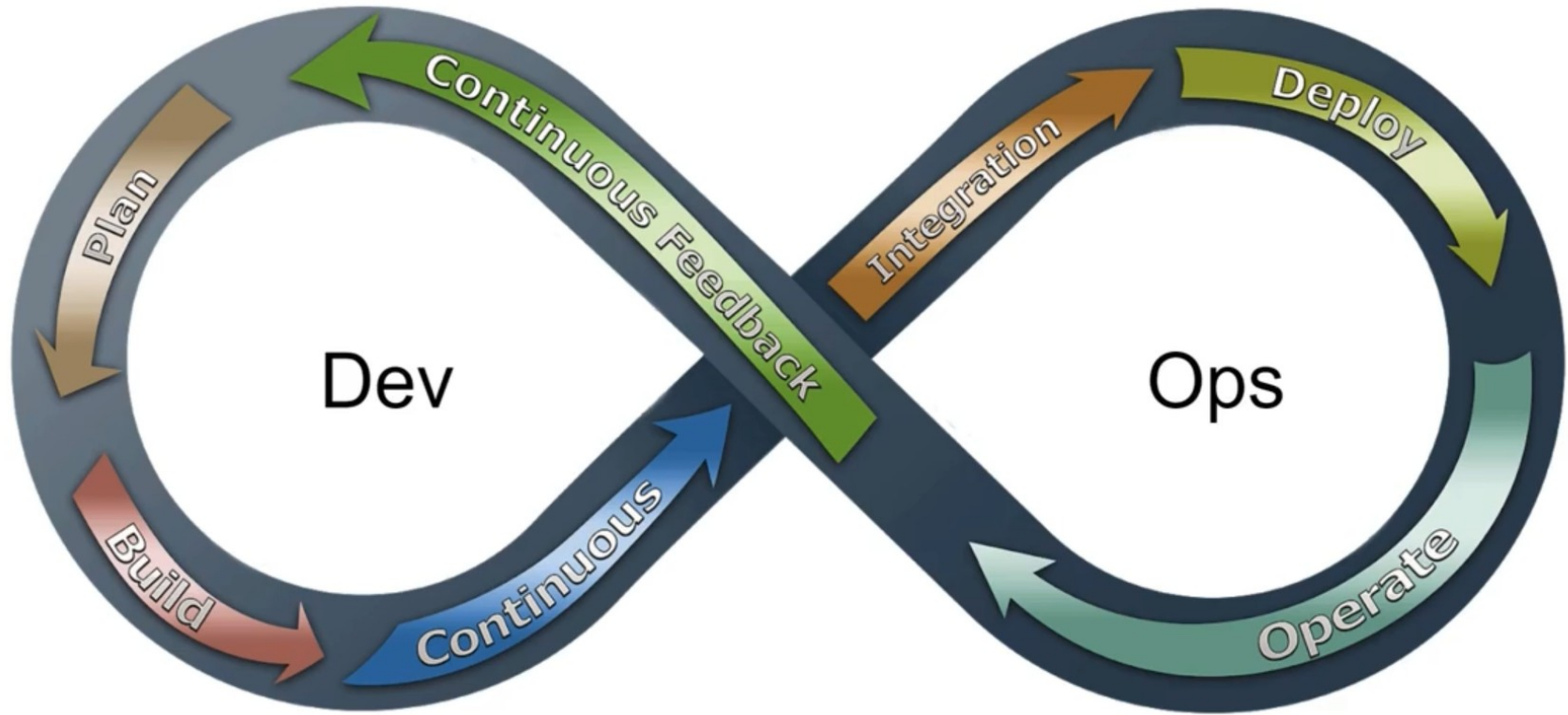
There are three endpoints available:

- POST /api/training/data - for gathering training data.
- POST /api/testing/data - for gathering testing data. If you have the 'Live classification' page open in your browser the file will automatically be classified against the current impulse.
- POST /api/anomaly/data - for anomaly data from deployed devices.

The API is located at:

HTTP

http://ingestion.edgeimpulse.com



What is MLOps? | NVIDIA

blogs.nvidia.com/blog/2020/09/03/what-is-mlops/

BookmarksDevelop a con...LatexPythonIALivrosQUT Robot Ac...RsyncLinuxMarkdownRocket Scienceyoutube-dlEscrita Cientif...IA ToolsLegendasInstituto Fede...

nvdiA

HOMEAI DATA CENTER DRIVING GAMING PRO GRAPHICS AUTONOMOUS MACHINES HEALTHCARE STARTUPS AI PODCAST

# What Is MLOps?

Machine learning operations, MLOps, are best practices for businesses to run AI successfully with help from an expanding smorgasbord of software products and cloud services.

September 3, 2020 by RICK MERRITT

## MLOPS: THE AI LIFECYCLE FOR IT PRODUCTION

```
graph LR
    subgraph Data_Pipeline [Data Pipeline]
        DC[Data Collection<br/>Continuous input stream] -- "Raw data" --> DI[Data Ingestion<br/>Prepare data for downstream ML applications]
        DI -- "Indexed data" --> DAC[Data Analysis & Curation<br/>Inspect and select the right data]
        DAC -- "Selected data" --> DL[Data Labeling<br/>Annotate data]
        DL -- "Labeled data" --> DV[Data Validation<br/>Verify that data is usable for the rest of the pipeline]
        DV -- "Validated data" --> DP[Data Preparation<br/>Prepare data for ML purposes (split, versioning, ...)]
    end

    subgraph Model_Pipeline [Model Pipeline]
        MT[Model Training<br/>Use ML algorithms to create models] -- "Models" --> ME[Model Evaluation<br/>Compute Model KPIs on test set]
        ME -- "KPIs" --> MSV[ML System Validation<br/>Validate that overall ML System can be deployed]
        MSV -- "Validated ML System" --> MSD[ML System Deployment<br/>Deploy the ML System to production]
    end

    MSD -- "Online ML System" --> DC

    subgraph ML_Engineers [ML ENGINEERS<br/>(Data Scientists + Data Engineers + SW engineers)<br/>PARAMETRIZE AND MONITOR]
        direction TB
        P1(( )) --> DAC
        P2(( )) --> DL
        P3(( )) --> ME
        P4(( )) --> MSV
    end

    subgraph Feedback_Loops [Feedback Loops]
        DP -.->|Data Needs| DAC
        DP -.->|Data fixes| DL
        MSD -.->|Online performance| DC
        MSD -.->|ML-ready Datasets| DP
    end
```

The diagram illustrates the MLOps lifecycle, showing the flow from data collection to model deployment and the central role of ML Engineers in parametrizing and monitoring the system.

**Data Pipeline:**

- Data Collection** (Continuous input stream) → **Data Ingestion** (Prepare data for downstream ML applications) → **Data Analysis & Curation** (Inspect and select the right data) → **Data Labeling** (Annotate data) → **Data Validation** (Verify that data is usable for the rest of the pipeline) → **Data Preparation** (Prepare data for ML purposes (split, versioning, ...))

**Model Pipeline:**

- Model Training** (Use ML algorithms to create models) → **Model Evaluation** (Compute Model KPIs on test set) → **ML System Validation** (Validate that overall ML System can be deployed) → **ML System Deployment** (Deploy the ML System to production)

**ML ENGINEERS (Data Scientists + Data Engineers + SW engineers) PARAMETRIZE AND MONITOR**

**Feedback Loops:**

- Data Needs** (from Data Preparation to Data Analysis & Curation)
- Data fixes** (from Data Preparation to Data Labeling)
- Online performance** (from ML System Deployment to Data Collection)
- ML-ready Datasets** (from ML System Deployment to Data Preparation)

