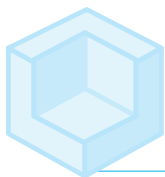**読者特典** リンク集

リンク集

本書で登場した外部リンクをまとめました。

● 本書のサンプルプログラムについて

- **付属データのダウンロードサイト shibuiwilliam/building-ml-system**
  URL　https://github.com/shibuiwilliam/building-ml-system/

● Chapter1

- **AIエンジニアのための機械学習システムデザインパターン**
  URL　https://www.shoeisha.co.jp/book/detail/9784798169453

- **shibuiwilliam/building-ml-system**
  URL　https://github.com/shibuiwilliam/building-ml-system/

- **Streamlit**
  URL　https://streamlit.io/

- **Plotly Dash**
  URL　https://plotly.com/dash/

- **Python pip**
  URL　https://github.com/pypa/pip

- **Poetry**
  URL　https://python-poetry.org/

- **MLflow**
  URL　https://www.mlflow.org/docs/latest/index.html

- **Hydra**
  URL　https://hydra.cc/docs/intro/

● Chapter2

● pandas
URL https://pandas.pydata.org/

● pandera
URL https://pandera.readthedocs.io/en/stable/

● shibuiwilliam/building-ml-system
URL https://github.com/shibuiwilliam/building-ml-system/tree/develop/chapter2_demand_forecasting_with_ml

● Streamlit
URL https://streamlit.io/

● Plotly
URL https://plotly.com/python/

● Argo Workflows
URL https://argoproj.github.io/argo-workflows/

● argo コマンド
URL https://github.com/argoproj/argo-workflows/releases

● Argo Workflows - The workflow engine for Kubernetes
URL https://argoproj.github.io/argo-workflows/architecture/

● argoproj/argo-workflows
URL https://argoproj.github.io/argo-workflows/quick-start/

● Chapter3

● AIAnimals
URL https://github.com/shibuiwilliam/building-ml-system/tree/develop/chapter3_4_aianimals

● The Oxford-IIIT Pet Dataset
URL https://www.robots.ox.ac.uk/~vgg/data/pets/

● 画像 URL
URL https://storage.googleapis.com/aianimals/images/ccf57b7bdcfb4792ade8b159d3998f09.jpg

● **初期データのJSON**
  URL https://github.com/shibuiwilliam/building-ml-system/tree/develop/chapter3_4_
        aianimals/dataset/data

● **ユーザデータ一覧**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
        aianimals/dataset/data/user.json

● **GCPのCloud Storageに保存された画像URL例**
  URL https://storage.googleapis.com/aianimals/images/000da08168194ab19428
        ec9154863364.jpg

● **Kubernetesクラスターを構築するための公式ドキュメント**
  URL https://kubernetes.io/ja/docs/setup/production-environment/tools/

● **Google Kubernetes Engine（GKE）**
  URL https://cloud.google.com/kubernetes-engine

● **Amazon Elastic Kubernetes Service（EKS）**
  URL https://aws.amazon.com/jp/eks/

● **Azure Kubernetes Service（AKS）**
  URL https://azure.microsoft.com/ja-jp/services/kubernetes-service/

● **Argo Workflows**
  URL https://argoproj.github.io/argo-workflows/quick-start/

● **Elasticsearch**
  URL https://www.elastic.co/jp/elastic-cloud-kubernetes

● **Open Images Dataset V6 + Extensions**
  URL https://storage.googleapis.com/openimages/web/index.html

● **shibuiwilliam/building-ml-system**
  URL https://github.com/shibuiwilliam/building-ml-system/tree/develop/chapter3_4_
        aianimals/violation_detection/model_development/no_animal_violation

● **MobileNet v3**
  URL https://arxiv.org/abs/1905.02244

● **TensorFlow Hub**
  URL https://tfhub.dev/

● **Hugging Face**
  URL https://huggingface.co/

● **Model Zoo**
`URL` https://modelzoo.co/

● **MobileNet v3 の学習済みモデル**
`URL` https://tfhub.dev/google/imagenet/mobilenet_v3_large_100_224/classification/5

● **pika**
`URL` https://pika.readthedocs.io/en/stable/

● **Streamlit**
`URL` https://streamlit.io/

● **Plotly**
`URL` https://plotly.com/python/

● **Elasticsearch**
`URL` https://www.elastic.co/jp/elasticsearch/

● **Firebase**
`URL` https://firebase.google.com/

● Chapter4

● **Word vectors for 157 languages**
`URL` https://fasttext.cc/docs/en/crawl-vectors.html

● **Elasticsearch Guide：Function score query**
`URL` https://www.elastic.co/guide/en/elasticsearch/reference/current/query-dsl-function-score-query.html

● **LightGBMRanker**
`URL` https://lightgbm.readthedocs.io/en/latest/pythonapi/lightgbm.LGBMRanker.html

● **Docs：Elasticsearch Learning to Rank: the documentation**
`URL` https://elasticsearch-learning-to-rank.readthedocs.io/en/latest/

● **MeCab**
`URL` https://taku910.github.io/mecab/

● **scikit-learn**
`URL` https://scikit-learn.org/stable/modules/generated/sklearn.feature_extraction.text.TfidfVectorizer.html

- **LGBMRanker**
  URL https://lightgbm.readthedocs.io/en/latest/pythonapi/lightgbm.LGBMRanker.html

- **LambdaRank**
  URL https://www.microsoft.com/en-us/research/wp-content/uploads/2016/02/MSR-TR-2010-82.pdf

- **FastAPI**
  URL https://fastapi.tiangolo.com/ja/

- **LGBMRegressor**
  URL https://lightgbm.readthedocs.io/en/latest/pythonapi/lightgbm.LGBMRegressor.html

- **ScaNN**
  URL https://github.com/google-research/google-research/tree/master/scann

- **Faiss**
  URL https://github.com/facebookresearch/faiss

- **NGT**
  URL https://github.com/yahoojapan/NGT

- **MobileNet v3 の特徴量抽出モデル**
  URL https://tfhub.dev/google/imagenet/mobilenet_v3_small_100_224/feature_vector/5

● おわりに

- **Launchable Inc.**
  URL https://www.launchableinc.com/

- **MLOps コミュニティ**
  URL https://mlops.connpass.com/

- **『Hidden Technical Debt in Machine Learning Systems』**
  URL https://proceedings.neurips.cc/paper/2015/file/86df7dcfd896fcaf2674f757a2463eba-Paper.pdf

- **『Structure and Interpretation of Computer Programs』**
  URL https://web.mit.edu/6.001/6.037/sicp.pdf

● プロフィール

- **GitHub「Machine learning system design pattern」**
  URL　https://github.com/mercari/ml-system-design-pattern

- **著者のGitHubアカウント**
  URL　https://github.com/shibuiwilliam

各章のリスト

● Chapter2

- **リスト2.1**
  URL　https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/src/dataset/schema.py

- **リスト2.2**
  URL　https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/src/jobs/retrieve.py

- **リスト2.3**
  URL　https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/src/dataset/schema.py

- **リスト2.4**
  URL　https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/src/models/preprocess.py

- **リスト2.5**
  URL　https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/src/models/preprocess.py

- **リスト2.6**
  URL　https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/hydra/2021_04.yaml

- **リスト2.7**
  URL　https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/hydra/2021_04.yaml

- **リスト2.8**
  URL　https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/src/models/light_gbm_regression.py

- **リスト2.9**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/src/jobs/predict.py

- **リスト2.10**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/ml/src/jobs/predict.py

- **リスト2.11**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage0/bi/src/view.py

- **リスト2.12**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage1/infrastructure/manifests/mlflow/mlflow.yaml

- **リスト2.13**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter2_
  demand_forecasting_with_ml/stage1/infrastructure/manifests/argo/workflow/
  data_registration.yaml

● Chapter3

- **リスト3.1**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
  aianimals/violation_detection/model_development/no_animal_violation/src/jobs/
  retrieve.py

- **リスト3.2**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
  aianimals/violation_detection/model_development/no_animal_violation/src/jobs/
  load_data.py

- **リスト3.3**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
  aianimals/violation_detection/model_development/no_animal_violation/src/models/
  abstract_model.py

- **リスト3.4**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
  aianimals/violation_detection/model_development/no_animal_violation/src/models/
  mobilenetv3.py

- **リスト3.5**
  URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
  aianimals/violation_detection/model_development/no_animal_violation/src/models/
  mobilenetv3.py

● **リスト3.6**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/model_development/no_animal_violation/src/models/
mobilenetv3.py

● **リスト3.7**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/model_development/no_animal_violation/src/main.py

● **リスト3.8**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/model_development/no_animal_violation/hydra/
mobilenet_v3.yaml

● **リスト3.9**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/infrastructure/manifests/argo/workflow/no_animal_violation_train.yaml

● **リスト3.10**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/model_development/no_animal_violation/src/main.py

● **リスト3.11**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/docker-compose.yaml

● **リスト3.12**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/api/src/infrastructure/messaging.py

● **リスト3.13**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/api/src/usecase/animal_usecase.py

● **リスト3.14**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/no_animal_violation/proxy/src/job/violation_
detection_job.py

● **リスト3.15**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/no_animal_violation/proxy/src/service/predictor.py

● **リスト3.17**

`URL` https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/no_animal_violation/serving/Dockerfile

● **リスト3.18**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/no_animal_violation/serving/tf_serving_entrypoint.sh

● **リスト3.19**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/registry/src/job/register_violation_job.py

● **リスト3.20**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/registry/src/usecase/violation_usecase.py

● **リスト3.21**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/infrastructure/manifests/violation_detection/no_animal_violation_proxy.
yaml

● **リスト3.22**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/infrastructure/manifests/violation_detection/no_animal_violation_serving.
yaml

● **リスト3.23**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/infrastructure/manifests/violation_detection/registry.yaml

● **リスト3.24**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/portal/src/model.py

● **リスト3.25**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/portal/src/service.py

● **リスト3.26**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/portal/src/view.py

● **リスト3.27**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/violation_detection/portal/src/view.py

● Chapter4

● **リスト4.1**
URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/dataset/data/access_logs.json

- **リスト4.2**

- **リスト4.3**

- **リスト4.5**

- **リスト4.6**

- **リスト4.7**

- **リスト4.8**

- **リスト4.9**

- **リスト4.10**

- **リスト4.11**

- **リスト4.12**

- **リスト4.13**

- **リスト4.14**

● **リスト4.15**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/search/model_development/learn_to_rank/src/main.py

● **リスト4.16**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/search/learn_to_rank/api/src/api/reorder.py

● **リスト4.18**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/infrastructure/manifests/search/learn_to_rank_lgbm_ranker.yaml

● **リスト4.19**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/infrastructure/manifests/argo/workflow/learn_to_rank_train.yaml

● **リスト4.20**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/ab_test_proxy/src/service/random_ab_test_service.py

● **リスト4.21**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/ab_test_proxy/src/service/user_ab_test_service.py

● **リスト4.22**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/infrastructure/manifests/argo/workflow/learn_to_rank_train.yaml

● **リスト4.23**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/search/model_development/similar_image_search/src/models/scann.py

● **リスト4.24**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/search/similar_image_search/proxy/src/usecase/search_similar_image_
usecase.py

● **リスト4.25**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/search/similar_image_search/proxy/src/service/predictor.py

● **リスト4.26**

URL https://github.com/shibuiwilliam/building-ml-system/blob/develop/chapter3_4_
aianimals/infrastructure/manifests/argo/workflow/search_similar_image_search_
train.yaml