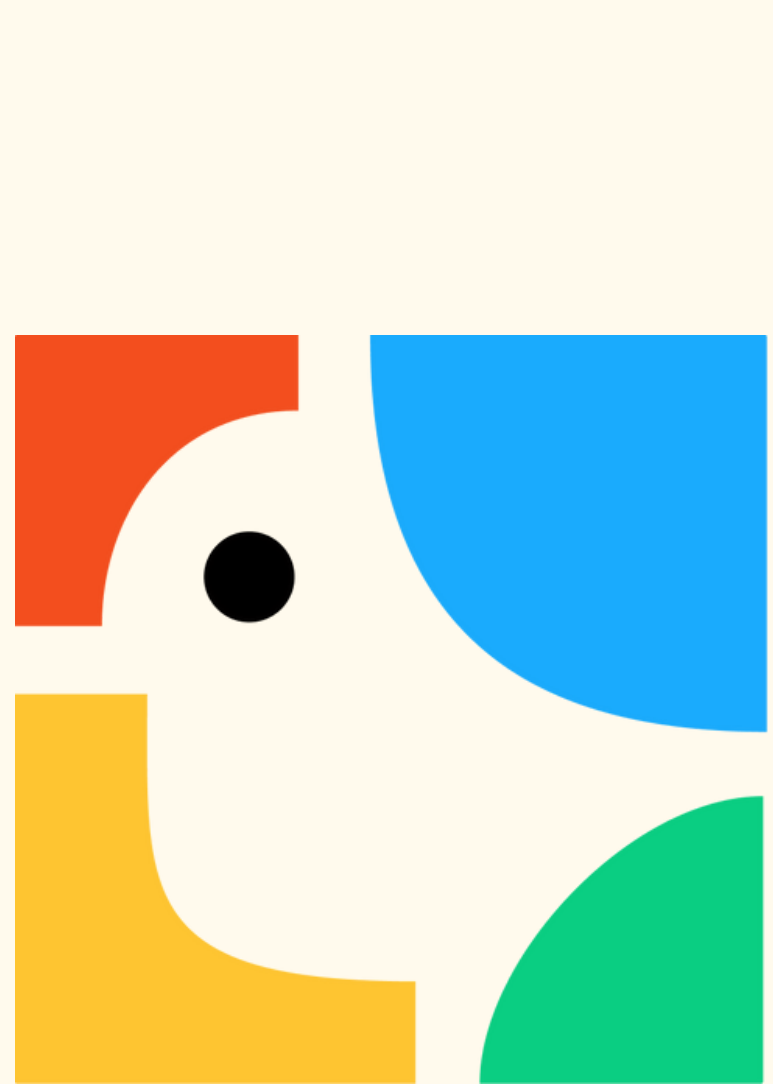


# UNLEASH POWER OF ML PIPELINES WITH TOWHEE



**BLUEPRINT TO  
WORK WITH  
UNSTRUCTURED  
DATA**



# **WHAT CHALLENGE TOWHEE SOLVES**

**CONNECTING MULTIPLE NN MODELS**

**INTERFACE FOR THE MODELS**

**PYTHONIC API**

**ETL ON UNSTRUCTURED DATA**

**DATA COLLECTION**

1) OVER **300 PRE-BUILT PIPELINES** ACROSS A MULTITUDE OF DIFFERENT DATA TRANSFORMATION TASKS (INCLUDING BUT NOT LIMITED TO IMAGE EMBEDDING, AUDIO EMBEDDING, TEXT SUMMARIZATION)

2) A WAY TO **BUILD PIPELINES OF ARBITRARY COMPLEXITY** THROUGH AN INTUITIVE PYTHON API CALLED DATA COLLECTION.

**[HTTPS://GITHUB.COM/INSIGHTBUILDER](https://github.com/insightbuilder)**

# WHAT APIS?

## **DATA COLLECTION API:**

DATA COLLECTION IS A PYTHONIC FRAMEWORK WHICH PROVIDES

- A METHOD-CHAINING STYLE API.
- MAKES IT EASIER ASSEMBLE A DATA PROCESSING PIPELINE
- DO RESEARCH ON ALGORITHMS AND MODELS
- APPLY THE MODEL TO REAL-WORLD BUSINESS

1. **EASY TO USE**
2. **BLAZING SPEED**
3. **ECOSYSTEM INTEGRATION**
4. **MULTIPLE MODALITIES**
5. **SOTA MODELS**

## **PYTHONIC API:**

- **PYTHONIC METHOD-CHAINING STYLE API:** DESIGNED TO BEHAVE AS A PYTHON LIST OR ITERATOR,
- **ALLOWS THE FUNCTION/OPERATOR INVOCATION CHAIN TO CONTINUE EXECUTING ON EXCEPTION.**
- **VARIOUS PRE-DEFINED OPERATORS**

# ENOUGH THEORY : WHERE IS CODE

## TOWHEE WORK WITH:

- PANDAS SCIKIT-LEARN SCIKIT-LEARN OPENCV-PYTHON IPYTHON MATPLOTLIB
- ARBITRARILY WRITTEN PYTHON FUNCTIONS
- HAS IN-BUILT MAP AND FILTER
- WORKS IN MULTIPLE MODES
  - LIST-MODE
  - STAGE-WISE
  - ITERATOR-MODE
  - STREAM-WISE

1. DATACOLLECTION TAKES ONE ELEMENT FROM THE INPUT AND APPLIES STAGE 1 AND STAGE 2 SEQUENTIALLY ;
2. SINCE DATACOLLECTION HOLDS NO DATA, INDEXING OR SHUFFLE IS NOT SUPPORTED;

```
DC = (  
    DATACOLLECTION.RANGE(100)  
    .FILTER(IS_PRIME)  
    .FILTER(LAMBDA X: X%10 == 3)  
    .MAP(STR)  
)  
  
DC.TO_LIST()  
['3', '13', '23', '43', '53', '73', '83']
```

```
DATASET =  
DATACOLLECTION.FROM_GLOB('PATH_TRAIN/*.  
JPG') \  
    .LOAD_IMAGE() \  
    .RANDOM_RESIZE_CROP(224) \  
    .RANDOM_HORIZONTAL_FLIP() \  
    .CVT_COLOR('RGB2BGR') \  
    .NORMALIZE() \  

```

```
.TOWHEE.IMAGE_EMBEDDING(MODEL_NAME='RE  
SNET101')
```

# READY FOR PRACTICE???

## insightbuilder/ python\_de\_learners\_data



Repo contains the code, data and supporting documents including presentations, playbooks and additional documents to support learning

 2  
Contributors

 0  
Issues

 22  
Stars

 9  
Forks

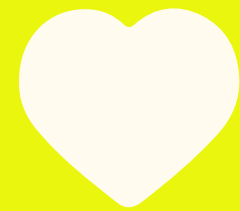


**python\_de\_learners\_data/towhee\_exploration\_intro.ipynb at main · insightbuilder/python\_de\_learners\_data**

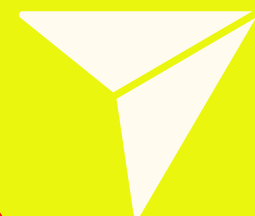
Repo contains the code, data and supporting documents including presentations, playbooks and additional documents to support learning - python\_de\_learners\_data/towhee\_exploration\_intro.ipynb at mai...

 GitHub

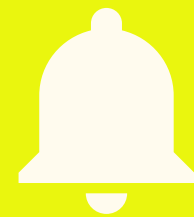
# THANKS FOR WATCHING



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