What is **AI Pro**?

**AI Pro** is an open-source data processing framework for Artificial Intelligence (AI) models. It supports major deep learning frameworks and Open Neural Network Exchange (ONNX).

Why use **AI Pro**, what is unique about it?

**AI Pro** has all the quintessential features to perform end-to-end data processing pipelines without a single line of code. Yes, you read it right, **AI Pro**’s working principle is configuration as code i.e. **AI Pro** empowers non-data-scientist to run prebuilt AI models without writing any code. Data pipelines are defined as directed acyclic graph (DAGs).

How to use **AI Pro**?

**AI Pro** provides a Web User Interface (WebUI) for creating, managing and running data pipelines. Demos, tools, prebuilt models and configurations will be available from the website. Experts users can modify/update easy-entensible pluggable modules, custom models according to their needs and contribute in development of **AI Pro**.

**AI Pro** Data Pipeline Example

![Data Pipeline Example](image)

**AI Pro**’s Entities

We define entity as an abstract component responsible for either ingestion, transformation, addition, removal, or storage of data elements in the process of data flow. We present a brief introduction of each entity with example configuration.

**Data Source Entity**. Data pipeline always starts with a data source entity. **AI Pro** provides support for various types of data sources, such as (i) files, (ii) streaming APIs, and (iii) NoSQL Databases.

```
{ alias: "Twitter Streaming Source", 
  api_key: "XXXXXXX", 
  url: "http://example.com/api/data/" }  
```

**Filter Entity**. A filter entity controls data flow in data pipeline with conditional mathematical statement on data attributes. The output of a filter entity flows through separate paths in the DAG, or even discard certain data elements based on configuration.

```
{ alias: "Language filter", 
  attribute: "lang", 
  value: "en", 
  condition: "==" }  
```

**Model Entity**. A model entity wraps an AI model with preprocessor and core model code. It has two sub-entities: (i) Preprocessor (ii) Core AI. Prebuilt model configurations can be obtained from model zoo.

```
{ alias: "Sentiment Model, custom", 
  input_attributes: ["text"], 
  module_file_path: "uploads/sentiment.py", 
  method_name: "predict", 
  module_class_name: "SentimentModel", 
  preprocessors_file_name: ["tweet_preprocessor.py"], 
  preprocessors_method_name: "preprocess" }  
```

**Data Sink Entity**. A data pipeline can have multiple storage entities that store processed data at different locations. **AI Pro** currently supports three types of storage entities: (a) Regular file, (b) Database (c) Standard I/O.

```
{ alias: "tweets.txt", 
  collection: ["tweets"], 
  alias: "tweets MongoDB Connection", 
  host: "localhost", 
  type: "MongoDB", 
  port: 27017 }  
```

**Custom Entity**. Experts can create custom entities for customized transformation of data elements. One example of such a custom entity that is included in **AI Pro** is geo-location mapping.