Tuning Fork

“Your Cloud data Science Lab”

Tuning Fork is your data science lab. It enables Enterprise data science departments to run experiments on the cloud. Using the REST API, data scientists can run standard tests and procedures in Tuning Fork enabling them to fine-tune models for performance.

Enterprise customers can define custom tests and procedures which can be reused in multiple projects.

Benefits

- **Is Machine Learning Feasible with your data?:** Caltech Prof. Yaser Abu Mostafa's 3-criteria test. Is there a pattern, to learn from? Are you unable to pin down the pattern mathematically? Does data that represents the pattern exist? Traditionally this process takes weeks. Tuning Fork shrinks this process to hours.
- **Design Experiments quickly:** "I have the advantage of having found out, how hard it is to really get to know something, how careful you have to be about checking the experiments, how easy it is to make mistakes and fool yourself." - Richard Feynman. Design and run lots of experiments on your data leaving out the guesswork
- **Fine-tune models for performance:** While modeling machine learning solutions is only half the problem. The other half is fine-tuning the model for performance. The tools provided by Tuning Fork enables you to fine-tune models for performance efficiently

- **Rapid Development Development:** Rapid Model development is not about providing automated tools to create models, but tools to understand and transform data. The tests and procedures of Tuning Fork enable the data scientist to develop and deploy machine learning model rapidly in days, instead of months

Features

- **Tests to learn about data:** 60% of data science is about collecting and organizing data. Get visualizations about your data such as normality, 7-number summary, outliers instantly without writing code.
- **Procedures to transform data:** Transform data instantly using procedures such as normalizing, standardizing, splitting data without writing code. Enterprise Customers can write their own custom procedures which can be reused across projects.
- **Weakly label data:** "If big data is the new oil, Labeled data is the 'new new' oil". Enterprises cannot afford to outsource data labeling as domain knowledge is confidential and scarce. Write functions to label lots of data automatically utilizing the scarce domain experts for manually labeling a small dataset
- **Augment Data:** Machine learning and especially deep learning needs lots and lots of data. Tuning Fork can automatically generate synthetic data enabling you to do machine learning with a much smaller dataset.

REST API

Tuning Fork provides a dead-simple REST API to access the Data Science Lab Service.

```
$ # Ingest the unlabeled CSV file and get a new Project ID
$ curl -F 'unlabeled=@/home/alice/data.csv' POST https://api.tuningfork.ai/ingest
https://api.tuningfork.ai/a17766c6/test/normality
https://api.tuningfork.ai/a17766c6/test/outliers
https://api.tuningfork.ai/a17766c6/test/stats
https://api.tuningfork.ai/a17766c6/test/separable
https://api.tuningfork.ai/a17766c6/test/enumerate/<text_column_name>
https://api.tuningfork.ai/a17766c6/procedure/weakly_label
https://api.tuningfork.ai/a17766c6/procedure/normalize
https://api.tuningfork.ai/a17766c6/procedure/standardize

$ # tests are HTTP GETs and procedures are HTTP POSTs
```

```
$ # Ingest the labeled CSV file and get a new Project ID
$ curl -F 'labeled=@/home/alice/labeled_data.csv' POST https://api.tuningfork.ai/ingest
https://api.tuningfork.ai/b28877b5/procedure/augment
https://api.tuningfork.ai/b28877b5/procedure/split

$ # procedures are HTTP POSTs
```

```
$ # Ingest the Model file and get a new Project ID
$ curl -F 'model=@/home/alice/model.h5' POST https://api.tuningfork.ai/ingest
https://api.tuningfork.ai/c39933f2/procedure/model
https://api.tuningfork.ai/c39933f2/procedure/learn
https://api.tuningfork.ai/c39933f2/test/metrics
https://api.tuningfork.ai/c39933f2/procedure/predict

$ # tests are HTTP GETs and procedures are POSTs
```

Enterprise Support

If you need Tuning Fork for data over 10,000 rows and/or for custom tests and procedures, please contact us for Enterprise plans.

Contact

Website: https://tuningfork.ai

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Github: https://github.com/vasusrini/TuningForkAIDocs