



## Application Layer

Model Serving and REST API

Agentic Interface and MCP Integration



### Reader

#### Filesystems

- Local Reading
- Cloud Reading

#### Data Handling

- Agnostic Backend
- Tabular and Parquet Data
- Metadata



### Data Engine

#### Filtering

#### Splitting

- Ordering (Temporal/Random)
- Strategy (Holdout/Leave-k-out)
- Cross Validation

#### Dataset

- Interaction Handler
- Session Handler
- Context Handler
- Data Alignment
- Training Structures
- Eval. Structures



### Recommendation Engine

#### Trainer

- MLOps
- Carbon Footprint
- Cluster Resource

#### Models

- Collaborative Filt.
- Sequential
- Context-aware
- Content-based
- Hybrid



### Evaluation

#### Evaluator

#### Metrics

- Accuracy
- Coverage
- Bias
- Diversity
- Fairness
- Novelty
- Rating

#### Statistical Tests

- Paired Tests
- Statistical Corrections



### Writer

#### Filesystems

- Local Writing
- Cloud Writing

#### HPO Results

- Eval. Results
- Best Parameters
- Time Reports
- Statist. Significance
- Checkpointing
- Train Logging

#### Carbon Footprint & Green AI Profiling