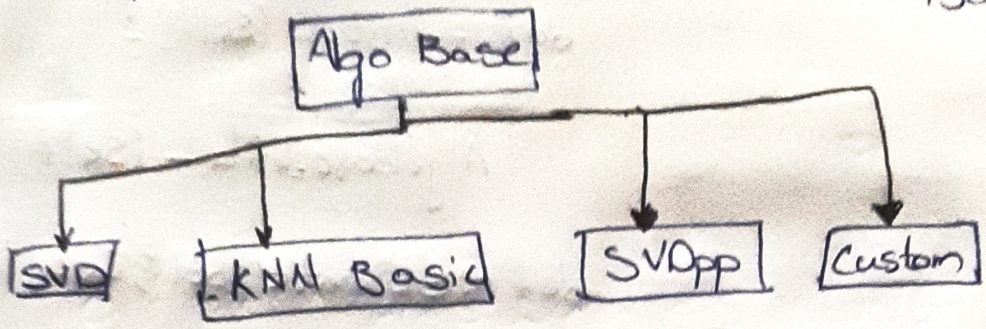
Our Recommender Engine Architecture.

Supriselib algorithm base class

Supelib has python base class called Algo Base



↳ Here, we have an SVD class which inherits from algo base class.

↳ That means SVD class may have functions & data specific to the SVD Recommender Algorithm but it also has access to the functions & data defined in the Algobase class.

Creating a Custom algorithm

↳ create a new class that inherits from Algo Base.

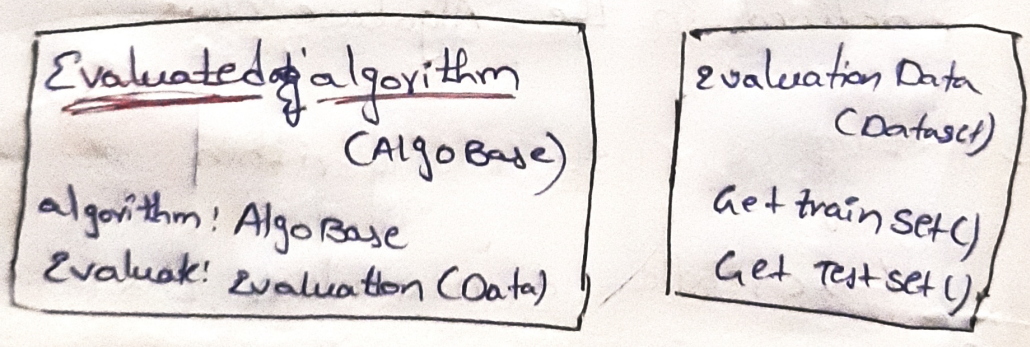
{ SupriseLib is built around the architecture of predicting the ratings of every movie for every user & giving back top prediction as your recommendations.

step 1: Implement an Estimate Python

```
class MyAlgorithm(AlgoBase):
    def __init__(self):
        AlgoBase.__init__(self)
    def estimate(self, user, item):
        return 3.
```

Note: Here our new Recommender algorithm called MyAlgorithm, just predicts a rating of three stars for all of them.

step 2 Building on top of SurpriseLib



Recommender Metrics

↳ Now, we want apply all those different evaluation metrics to the algorithms we work with; So to do that we create a New class

↳ (Diversity, accuracy, HITrate ...)

called Evaluated algorithm

↳ It contains an algorithm from SurpriseLib but introduces a new function called Evaluate

This runs all of the metrics in the Recommender metrics on that algorithm

{ This class will measure accuracy, Coverage, Diversity, novelty, ...

↳ So, Evaluate uses functions in the Recommender Metric Class.

↳ To evaluate our Reccommender system, we need training & test set.

↳ This was done by Evaluation Data class

Step 3 → Algorithm Bake-offs

Evaluator (Dataset)

Evaluate()

dataset: Evaluated Dataset

Algorithms: Evaluted Algorithm

compare different Recommender algorithms against each other.

↳ Evaluator takes a raw data set & it

Create an Evaluated Dataset object from it

then you × call Add algorithm for each

algorithm you want to compare. this creates an Evaluated Algorithm.

↳ when you call Evaluate, it evaluates each evaluated algorithm and prints the result in a tabular form