linear_regressor.predict

```

Copy fnpredict(refself:LinearRegressor,X:Tensor)->Tensor;

```

Linear Regressor. Performs the generalized linear regression evaluation.

Args

- self
- : LinearRegressor - A LinearRegressor object.
- X
- : Input 2D tensor.
-

Returns

- Tensor containing the generalized linear regression evaluation of the input X.
-

Type Constraints

LinearRegressor andX must be fixed points

Examples

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Copy useorion::operators::tensor::{Tensor,TensorTrait,FP16x16Tensor,U32Tensor,FP16x16TensorAdd};
useorion::operators::ml::linear::linear_regressor::{ LinearRegressorTrait,POST_TRANSFORM,LinearRegressor };
useorion::numbers::{FP16x16,FixedTrait}; useorion::operators::nn::{NNTrait,FP16x16NN};

fnexample_linear_regressor()->Tensor {

letmutX:Tensor=TensorTrait::new( array![3,2].span(), array![ FP16x16{ mag:0, sign:false}, FP16x16{ mag:65536, sign:false},
FP16x16{ mag:131072, sign:false}, FP16x16{ mag:196608, sign:false}, FP16x16{ mag:262144, sign:false}, FP16x16{
mag:327680, sign:false}, ] .span() );

letcoefficients:Span=array![ FP16x16{ mag:19661, sign:false}, FP16x16{ mag:50463, sign:true},

] .span();

letintercepts:Span=array![ FP16x16{ mag:32768, sign:false},

] .span(); letintercepts=Option::Some(intercepts);

lettarget:usize=1; letpost_transform=POST_TRANSFORM::NONE;

letmutregressor:LinearRegressor=LinearRegressor{ coefficients, intercepts, target, post_transform };

letscores=LinearRegressorTrait::predict(refregressor,X);

scores }

                    [[-0.27], [-1.21], [-2.15]]

fnexample_linear_regressor_2()->Tensor {

letmutX:Tensor=TensorTrait::new( array![3,2].span(), array![ FP16x16{ mag:0, sign:false}, FP16x16{ mag:65536, sign:false},
FP16x16{ mag:131072, sign:false}, FP16x16{ mag:196608, sign:false}, FP16x16{ mag:262144, sign:false}, FP16x16{
mag:327680, sign:false}, ] .span() );

letcoefficients:Span=array![ FP16x16{ mag:19661, sign:false}, FP16x16{ mag:50463, sign:true}, FP16x16{ mag:19661,
sign:false}, FP16x16{ mag:50463, sign:true},

] .span();

letintercepts:Span=array![ FP16x16{ mag:32768, sign:false}, FP16x16{ mag:45875, sign:false},
```

] .span(); letintercepts=Option::Some(intercepts);

lettarget=2; letpost_transform=POST_TRANSFORM::NONE;

letmutregressor:LinearRegressor=LinearRegressor{ coefficients, intercepts, target, post_transform };

letscores=LinearRegressorTrait::predict(refregressor,X);

scores }

[[-0.27,-0.07], [-1.21,-1.01], [-2.15,-1.95]]

```

Previous Linear Regressor Next SVM Regressor

Last updated2 months ago
```