Evaluators

1 Why

We want to compare inductors.

2 Definition

An **induction evaluator** is a real-valued function on inductors. We call the result under the evaluator of an inductor the **induction error** or **error of the inductor**

A **prediction evaluator** is a real-valued function on pairs of postcepts. We call result under the evaluator the **prediction error** or **error of the predictor**.

2.1 Dual Record Prediction Evaluators

Let i be an inductor and let r and s be two record sequences. Denote the predictor $i(r)$ associated with r by f. Let g be a prediction evaluator. Let $s = ((u^1, v^n), \ldots, (u^n, v^n))$. Then consider

$$\sum_{i=1}^{n} g(f(u^n), v^n)).$$

Consider an inductor, two record sequences, and a prediction evaluator. Consider Consider the predictor associated with first record sequences. Consider the evaluator which sums the prediction errors on the second record sequence of the the predictor induced on the first record sequence.

The natural evaluator associated with this inductor is the We consider the pred The first record sequencerecord sequence

Commonly evaluators have structure. We fix a record sequence and consider the predictor induced by it. We consider a second record sequence and compare the predictor's result for a precept with the postcept paired with it in the second record sequence.

A **data-set evaluator** is the evaluator for which