

Spot Forecasting Contest

A. Introduction

In the introductory lecture, I alluded to the problems inherent in defining what constitutes a "good" or "correct" forecast DETERMINISTICALLY. Hopefully, we will have time this semester to discuss this in great depth. In general, one statistical tool to quantify forecast accuracy is called a "skill score". Basically, a skill score is an objective way of verifying forecast accuracy AGAINST some absolute rules. The rules are applied objectively in much the same way rules are enforced in games.

Of course, one would hope that whatever skill score is used is an accurate estimate of such forecast accuracy. In addition, skill scores are designed to be easily calculated and based upon a verification scheme which is easy to apply and one in which the forecaster cannot "play the system". The scheme that we will be using in EARTH 465 is designed to quickly let you know what your limitations are as forecaster. I will verify and score your forecasts and hand them back to you the next day (lab) so that you can learn from your mistakes.

B. Persistence Scores as Part of the Skill Score used in this class

When you make a 24 hour forecast, whether you know it or not, your first guess of what the forecast should be is what happened the day before. Such a forecast is called a *persistence* forecast. You will find that persistence is a very good forecaster. Indeed, in California's summer a coastal forecaster would be crazy if his or her forecasts did not reflect high persistence. Obviously, persistence cannot anticipate weather changes. This is where your talent and education come to play. It is your job to anticipate such changes; you will have shown absolutely no skill as a forecaster unless you do better than persistence. The skill score for the forecasting contest will be based upon a quantitative comparison of your skill versus the skill of persistence, in the following manner:

$$\text{Score} = (\text{Numbers of errors made by persistence}) - (\text{Numbers of errors made by student})$$

EXAMPLE

<u>Forecaster</u>	<u>Errors</u>	<u>Score</u>
Persistence	33	0
Forecaster 1	41	-8
Forecaster 2	28	5

Weekly Score

Score for Day 1	Persistence (55) - Student (40) =	15
Score for Day 2	58 - 59 =	-1
Etc.		

A portion of your final grade will be determined by your score and how you rank in the class. For example, if your score is about the same as Persistence, your grade will not be good. If you cannot be Persistence, then you have failed the test of the big meteorologist in the sky. Experience has shown me and countless students who have come through this course that your ability to use the facsimile products effectively and in a focused manner will be directly proportional to your ability to forecast important weather changes.