Quiz 7: Interpolation and Synthetic Aperture Radar (SAR)

Due Oct 20 at 4:15pm **Points** 15 **Questions** 6
Available Oct 19 at 4:15pm - Oct 20 at 4:15pm 24 hours **Time Limit** None

Instructions

This quiz features content from 10/17 (interpolation) and 10/19's guest lecture by Dr. Zhang on Synthetic Aperture Radar (SAR).

This quiz was locked Oct 20 at 4:15pm.

Attempt History

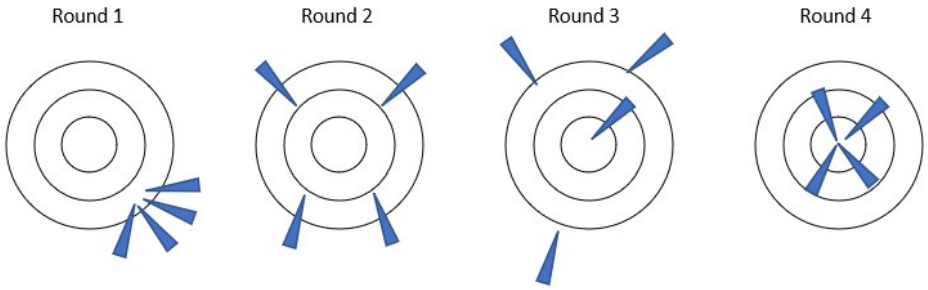
	Attempt	Time	Score
LATEST	Attempt 1	51 minutes	11 out of 15

Score for this quiz: **11** out of 15
Submitted Oct 19 at 10:50pm
This attempt took 51 minutes.

Question 1

2 / 2 pts

In four rounds of darts, Dr. Viers threw darts in such a way that they landed in the following locations on the dart board. Match the visualizations to their classification of accuracy and/or precision.



Correct! **Round 1** Low Accuracy, High Pre

Correct! **Round 2** High Accuracy, Low Pre

Correct! **Round 3** Low Accuracy, Low Prec

Correct! **Round 4** High Accuracy, High Pre

Question 2

2 / 2 pts

What does the "k" in K-Folds cross validation procedure represent/stand for?

- The measure of spatial autocorrelation in sampling patterns
- The number of fixed points in a TIN
- Short for "kriging"

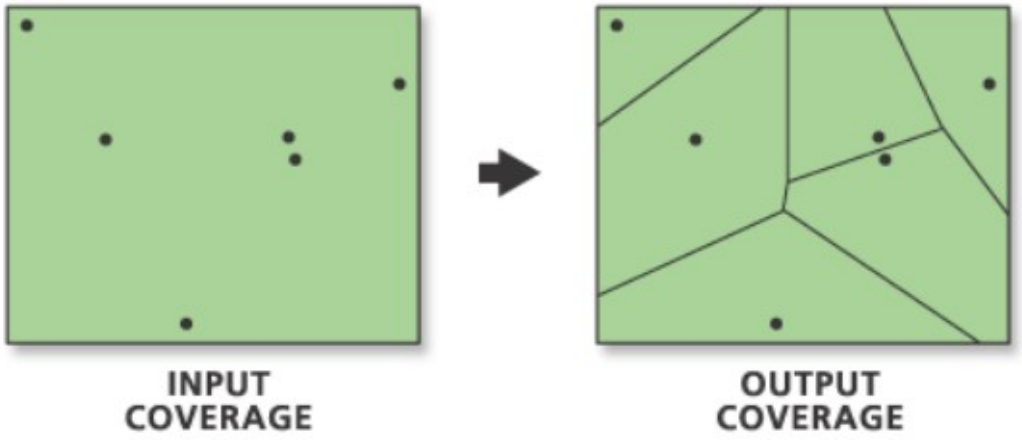
Correct! Samples taken and replaced during cross validation

Question 3

3 / 3 pts

Theissen Polygons, as shown below, are created using Nearest Neighbor Interpolation.

Briefly (2-3 sentences), and in your own words, describe why Nearest Neighbor Interpolation is considered the conceptually simplest method of interpolation.



Your Answer:

Nearest neighbor interpolation is considered the simplest interpolation method because it doesn't use a complex algorithm to assume interpolated points. To assume interpolated points, nearest neighbor looks at the neighboring pixels close to the original point and decides to assign a value to the interpolated point based on the values of the closest pixels. There are different ways nearest neighbor decides the interpolated point, it could look at the nearest 4, 8 or 16 pixels, that hold a majority in that neighborhood and decides on that.

ah - Is this what you mentioned in lab? Sorry it didn't click at the moment.

Question 4

0 / 2 pts

True or False:

Exact interpolators (e.g. Kriging) have *high* prediction ability between points.

ou Answered

- (•) True

orrect Answer

- ( ) False

Question 5

2 / 4 pts

Define the phenomenon of "backscatter" in relation to Synthetic Aperture Radar (SAR) data collection in wet environments.

Your Answer:

Backscatter for Synthetic Aperture Radar data collection in wet environments simply refers to radar signals bouncing off of the ground or vegetation and returning to the back to the radar satellite in order to get visuals of the environment, all to collect data.

Question 6

2 / 2 pts

In remote sensing, if your sensor is *nadir* facing, which direction is it pointing?

- Right
- Up
- Down

Correct!

- Left

Quiz Score: **11** out of 15