

# Applied Machine Learning

## Lab 2 – Working with Spatial Data

### Overview

In this lab, you will use R to work with spatial data. Specifically, you will use Kriging to interpolate density values in a spatial data frame.

### What You'll Need

To complete this lab, you will need the following:

- An Azure ML account
- The files for this lab

**Note:** To set up the required environment for the lab, follow the instructions in the [Setup Guide](#) for this course.

### Exploring Spatial Data

In this exercise, you will explore the Meuse sample dataset, which contains data about heavy metal concentrations in the river Meuse in Belgium.

#### Upload a Jupyter Notebook

1. Browse to <https://studio.azureml.net> and sign in using the Microsoft account associated with your free Azure ML account.
2. If the **Welcome** page is displayed, close it by clicking the **OK** icon (which looks like a checkmark). Then, if the **New** page (containing a collection of Microsoft samples) is displayed, close it by clicking the **Close** icon (which looks like an X).
3. In Azure ML Studio, click **NEW**; and in the **NEW** dialog box, in the **NOTEBOOK** tab, click **Upload**. Then in the **Upload a new notebook** dialog box, browse to select the **Kriging.ipynb** file from the folder where you extracted the lab files on your local computer. Enter the following details, and then click the ✓ icon.
  - **Enter a name for the new notebook:** Kriging
  - **Select a language for the new notebook:** R
4. Wait for the upload of the notebook to complete, then click **OK** on the status bar at the bottom of the Azure ML Studio page.

#### Explore Spatial Data

1. In Azure ML Studio, on the Notebooks tab, open the **Kriging** notebook you uploaded in the previous procedure.

2. Follow the instructions in the notebook to work with the spatial data.
3. When you have completed all of the coding tasks in the notebook, save your changes and then close and halt the notebook.

## Summary

In this lab, you have used R in a Jupyter notebook to work with spatial data.