

Data Flow Diagram Two: Create Fishnet (Grid) and Perform Linear Directional Mean for Each Lineament and Stream Network to Compare Directional Analysis

Directional Analysis of each Aspect, Slope, and Hillshade Lineament Swath in Juxtaposition to Tharsis Mons Study Area and Outliers

Create Fishnet (Grid Index) for Mars to Input Lineamnets and Stream Networks (for each Linear Feature)

```
In [2]: arcpy.cartography.GridIndexFeatures(r"C:\Users\danie861\Desktop\FinalProject\FinalProje  
# Creates a Grid Index that is suppose to be intended for gridded pages and maps, but c
```

Out[2]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\MarsGrid

Messages

Start Time: Monday, November 21, 2022 12:49:16 PM

Succeeded at Monday, November 21, 2022 12:49:16 PM (Elapsed Time: 0.77 seconds)

Insert Each Lineament Feature into Fishnet (Grid) for Tharsis Mons Study Area For Linear Directional Mean Analysis by Splitting on Grid Index

A Feature Dataset is Created for Each Digital Product/Lineament Feature when Split by Grid Index:

```
In [2]: arcpy.analysis.Split("AspectLinear", "MarsGridPoly", "PageName", r"C:\Users\danie861\De  
# Aspect Split
```

Out[2]:

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AspectLinear ClipLayer

Messages

Start Time: Monday, November 21, 2022 1:16:37 PM

Started Spark Job 1 with 16 tasks.

Spark Job 1 completed in 0.5 seconds.

Started Spark Job 2 with 48 tasks.

Spark Job 2 completed in 2.3 seconds.

Succeeded at Monday, November 21, 2022 1:16:43 PM (Elapsed Time: 5.69 seconds)

```
In [ ]: arcpy.analysis.Split("SlopeLinear", "MarsGridPoly", "PageName", r"C:\Users\danie861\Desktop\Slope Split
```

```
In [ ]: arcpy.analysis.Split("HillshadeLinear", "MarsGridPoly", "PageName", r"C:\Users\danie861\Desktop\Hillshade Split
```

Perform Linear Directional Mean Analysis on each Main Lineament Feature and 20 Split sub-features

Aspect LDM Analysis:

```
In [ ]: arcpy.stats.DirectionMean("AspectLinear", r"C:\Users\danie861\Desktop\FinalProject\Fin
```

Slope LDM Analysis:

```
In [3]: arcpy.stats.DirectionMean("SlopeLinear", r"C:\Users\danie861\Desktop\FinalProject\Fin
```

Out[3]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\SlopeLinear_DirectionalMean

Messages

Start Time: Friday, December 2, 2022 8:59:06 AM

WARNING 000642: Problems reading 3 of 1057 total records.

WARNING 000848: Features with bad records (only includes first 30): OBJECTID = 1055, 1056, 1057.

Succeeded at Friday, December 2, 2022 8:59:30 AM (Elapsed Time: 23.94 seconds)

Hillshade LDM Analysis:

```
In [4]: arcpy.stats.DirectionMean("HillshadeLinear", r"C:\Users\danie861\Desktop\FinalProject\Fin
```

Out[4]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\HillshadeLinear_DirectionalMean

Messages

Start Time: Friday, December 2, 2022 9:00:53 AM

WARNING 000642: Problems reading 12 of 1817 total records.

WARNING 000848: Features with bad records (only includes first 30): OBJECTID = 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1816, 1817, 1818.

Succeeded at Friday, December 2, 2022 9:01:12 AM (Elapsed Time: 18.96 seconds)

Aspect 20 Splits LDM Analysis:

```
In [ ]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
In [ ]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
In [ ]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
In [ ]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
In [1]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[1]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA26_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:12:11 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:12:31 AM (Elapsed Time: 19.35 seconds)

```
In [2]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[2]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA28_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:21:03 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:21:23 AM (Elapsed Time: 20.33 seconds)

In [3]: `arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau`

Out[3]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA31_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:21:27 AM

Succeeded at Monday, November 28, 2022 9:21:47 AM (Elapsed Time: 19.70 seconds)

In [4]: `arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau`

Out[4]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA32_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:21:52 AM

Succeeded at Monday, November 28, 2022 9:22:12 AM (Elapsed Time: 19.51 seconds)

In [5]: `arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau`

Out[5]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA41_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:22:16 AM

Succeeded at Monday, November 28, 2022 9:22:36 AM (Elapsed Time: 19.76 seconds)

In [6]: `arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau`

Out[6]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA42_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:22:42 AM

Succeeded at Monday, November 28, 2022 9:23:01 AM (Elapsed Time: 19.63 seconds)

In [7]:

```
 arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[7]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA43_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:23:06 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:23:26 AM (Elapsed Time: 19.87 seconds)

In [8]:

```
 arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[8]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AB5_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:23:31 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:23:51 AM (Elapsed Time: 19.38 seconds)

In [9]:

```
 arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[9]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AB6_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:23:56 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:24:15 AM (Elapsed Time: 19.56 seconds)

```
In [10]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[10]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AB24_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:24:20 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:24:41 AM (Elapsed Time: 20.38 seconds)

```
In [11]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[11]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AB25_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:24:46 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:25:06 AM (Elapsed Time: 19.97 seconds)

```
In [12]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[12]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AB26_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:25:11 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8

features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:25:31 AM (Elapsed Time: 19.46 seconds)

```
In [13]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[13]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AB31_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:25:36 AM

Succeeded at Monday, November 28, 2022 9:25:56 AM (Elapsed Time: 19.96 seconds)

```
In [14]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[14]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AB32_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:26:01 AM

Succeeded at Monday, November 28, 2022 9:26:21 AM (Elapsed Time: 19.58 seconds)

```
In [15]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[15]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AB37_DirectionalMean

Messages

Start Time: Monday, November 28, 2022 9:26:26 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:26:45 AM (Elapsed Time: 18.86 seconds)

```
In [16]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[16]: **Output**

```
C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AB38_DirectionalMean
```

Messages

Start Time: Monday, November 28, 2022 9:26:50 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:27:09 AM (Elapsed Time: 19.18 seconds)

Slope 20 Splits LDM Analysis:

```
In [17]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[17]:

Output

```
C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA37_DirectionalMeanS
```

Messages

Start Time: Monday, November 28, 2022 9:41:36 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:41:54 AM (Elapsed Time: 18.38 seconds)

```
In [18]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[18]:

Output

```
C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA38_DirectionalMeanS
```

Messages

Start Time: Monday, November 28, 2022 9:42:00 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:42:18 AM (Elapsed Time: 18.23 seconds)

```
In [19]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[19]:

Output

```
C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Z44_DirectionalMeanS
```

Messages

Start Time: Monday, November 28, 2022 9:42:24 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:42:42 AM (Elapsed Time: 17.96 seconds)

```
In [20]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[20]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Z43_DirectionalMeanS

Messages

Start Time: Monday, November 28, 2022 9:42:48 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:43:06 AM (Elapsed Time: 18.26 seconds)

```
In [21]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[21]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Z41_DirectionalMeanS

Messages

Start Time: Monday, November 28, 2022 9:43:12 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:43:30 AM (Elapsed Time: 18.13 seconds)

```
In [22]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[22]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Z38_DirectionalMeanS

Messages

Start Time: Monday, November 28, 2022 9:43:35 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:43:54 AM (Elapsed Time: 18.16 seconds)

```
In [23]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[23]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Y44_DirectionalMeanS

Messages

Start Time: Monday, November 28, 2022 9:43:59 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:44:17 AM (Elapsed Time: 18.10 seconds)

```
In [24]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[24]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Y43_DirectionalMeanS

Messages

Start Time: Monday, November 28, 2022 9:44:23 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:44:41 AM (Elapsed Time: 18.05 seconds)

```
In [25]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[25]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Y42_DirectionalMeanS

Messages

Start Time: Monday, November 28, 2022 9:44:47 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8

features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:45:05 AM (Elapsed Time: 18.17 seconds)

```
In [26]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[26]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Y41_DirectionalMeanS

Messages

Start Time: Monday, November 28, 2022 9:45:11 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:45:29 AM (Elapsed Time: 18.13 seconds)

```
In [27]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[27]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Y38_DirectionalMeanS

Messages

Start Time: Monday, November 28, 2022 9:45:35 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 9:45:53 AM (Elapsed Time: 18.19 seconds)

```
In [28]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

ExecuteError

Traceback (most recent call last)

In [28]:

```
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP
roject\Default.gdb\SlopeLines\R26", r"C:\Users\danie861\Desktop\FinalProject\FinalPro
ject\Default.gdb\R26_DirectionalMeanS", "DIRECTION", "Id")
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1710:     raise e
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda>:

```

```
Line 512:     return lambda *args: val(*gp_fixargs(args, True))
```

ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1 feature(s) to compute results.
Failed to execute (DirectionalMean).

In [29]:

```
arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

ExecuteError Traceback (most recent call last)
In [29]:
Line 1: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP
roject\Default.gdb\SlopeLines\Q26", r"C:\Users\danie861\Desktop\FinalProject\FinalPro
ject\Default.gdb\Q26_DirectionalMeanS", "DIRECTION", "Id")

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1710: raise e

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1707: retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing_base.py, in <lambda
a>:
Line 512: return lambda *args: val(*gp_fixargs(args, True))

ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1
feature(s) to compute results.
Failed to execute (DirectionalMean).

In [31]:

```
arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

ExecuteError Traceback (most recent call last)
In [31]:
Line 1: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP
roject\Default.gdb\SlopeLines\P26", r"C:\Users\danie861\Desktop\FinalProject\FinalPro
ject\Default.gdb\P26_DirectionalMeanS", "DIRECTION", "Id")

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1710: raise e

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1707: retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing_base.py, in <lambda
a>:
Line 512: return lambda *args: val(*gp_fixargs(args, True))

ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1
feature(s) to compute results.
Failed to execute (DirectionalMean).

```
In [32]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError                                         Traceback (most recent call last)  
In [32]:  
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\SlopeLines\P24", r"C:\Users\danie861\Desktop\FinalProject\FinalPro  
ject\Default.gdb\P24_DirectionalMeanS", "DIRECTION", "Id")  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))  
  
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

```
In [33]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError                                         Traceback (most recent call last)  
In [33]:  
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\SlopeLines\O27", r"C:\Users\danie861\Desktop\FinalProject\FinalPro  
ject\Default.gdb\O27_DirectionalMeanS", "DIRECTION", "Id")  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))  
  
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

```
In [34]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError                                         Traceback (most recent call last)  
In [34]:  
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\SlopeLines\026", r"C:\Users\danie861\Desktop\FinalProject\FinalPro  
ject\Default.gdb\026_DirectionalMeanS", "DIRECTION", "Id")  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))  
  
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

```
In [35]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError                                         Traceback (most recent call last)  
In [35]:  
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\SlopeLines\024", r"C:\Users\danie861\Desktop\FinalProject\FinalPro  
ject\Default.gdb\024_DirectionalMeanS", "DIRECTION", "Id")  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))  
  
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

```
In [ ]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
In [30]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError                                         Traceback (most recent call last)  
-----
```

```
In [30]: arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\SlopeLines\N26", r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\N26_DirectionalMeanS", "DIRECTION", "Id")

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1710:     raise e

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionalMean_stats(*gp_fixargs
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda>:
Line 512:     return lambda *args: val(*gp_fixargs(args, True))

ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1
feature(s) to compute results.
Failed to execute (DirectionalMean).
```

Hillshade 20 Splits LDM Analysis:

```
In [36]: arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[36]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA22_DirectionalMeanHS

Messages

Start Time: Monday, November 28, 2022 10:14:22 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 10:14:40 AM (Elapsed Time: 18.04 seconds)

```
In [37]: arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[37]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA23_DirectionalMeanHS

Messages

Start Time: Monday, November 28, 2022 10:14:47 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8

features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 10:15:04 AM (Elapsed Time: 17.61 seconds)

In [38]:

```
arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

ExecuteError

Traceback (most recent call last)

In [38]:

```
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP
roject\Default.gdb\HillshadeLines\AA32_", r"C:\Users\danie861\Desktop\FinalProject\Fina
lProject\Default.gdb\AA32_DirectionalMeanHS", "DIRECTION", "Id")
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionMean:
Line 1710:     raise e
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionMean:
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda
a>:
```

```
Line 512:     return lambda *args: val(*gp_fixargs(args, True))
```

ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1 feature(s) to compute results.

Failed to execute (DirectionMean).

In [39]:

```
arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[39]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA36_DirectionalMeanHS

Messages

Start Time: Monday, November 28, 2022 10:15:30 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 10:15:48 AM (Elapsed Time: 18.00 seconds)

In [40]:

```
arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[40]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\AA37_DirectionalMeanHS

Messages

Start Time: Monday, November 28, 2022 10:15:54 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 10:16:12 AM (Elapsed Time: 17.73 seconds)

In [41]: `arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau`

Out[41]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\Z38_DirectionalMeanHS

Messages

Start Time: Monday, November 28, 2022 10:16:18 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 10:16:35 AM (Elapsed Time: 17.61 seconds)

In [42]: `arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau`

ExecuteError Traceback (most recent call last)

In [42]:

Line 1: `arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\HillshadeLines\W16_`, r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\W16_DirectionalMeanHS", "DIRECTION", "Id")

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1710: `raise e`

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1707: `retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))`

File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing_base.py, in <lambda>:
Line 512: `return lambda *args: val(*gp_fixargs(args, True))`

ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1 feature(s) to compute results.

Failed to execute (DirectionalMean).

In [43]: `arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau`

Out[43]: **Output**

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\V16_DirectionalMeanHS

Messages

Start Time: Monday, November 28, 2022 10:16:50 AM

WARNING 000642: Problems reading 1 of 2 total records.

WARNING 000848: Features with bad records (only includes first 30): OBJECTID = 2.

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 10:17:08 AM (Elapsed Time: 18.15 seconds)

In [44]:

```
 arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[44]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\U16_DirectionalMeanHS

Messages

Start Time: Monday, November 28, 2022 10:17:15 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 10:17:33 AM (Elapsed Time: 17.72 seconds)

In [45]:

```
 arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[45]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\T17_DirectionalMeanHS

Messages

Start Time: Monday, November 28, 2022 10:17:39 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 10:17:57 AM (Elapsed Time: 18.05 seconds)

In [46]:

```
 arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

Out[46]:

Output

C:\Users\danie861\Desktop\FinalProject\FinalProject\Default.gdb\T16_DirectionalMeanHS

Messages

Start Time: Monday, November 28, 2022 10:18:04 AM

WARNING 110068: The Rayleigh test requires at least 4 features for a two-dimensional result and 8 features for a three-dimensional result to be valid.

Succeeded at Monday, November 28, 2022 10:18:21 AM (Elapsed Time: 17.66 seconds)

In [47]:

```
arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

ExecuteError

Traceback (most recent call last)

In [47]:

```
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\HillshadeLines\S26", r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\S26_DirectionalMeanHS", "DIRECTION", "Id")
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))
```

ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1 feature(s) to compute results.

Failed to execute (DirectionalMean).

In [48]:

```
arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

ExecuteError

Traceback (most recent call last)

In [48]:

```
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\HillshadeLines\R26_", r"C:\Users\danie861\Desktop\FinalProject\Final  
Project\Default.gdb\R26_DirectionalMeanHS", "DIRECTION", "Id")
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))
```

ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1

```
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

```
In [50]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
ExecuteError Traceback (most recent call last)  
In [50]:  
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\HillshadeLines\Q32", r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\Q32_DirectionalMeanHS", "DIRECTION", "Id")  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))  
  
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

```
In [51]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
ExecuteError Traceback (most recent call last)  
In [51]:  
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\HillshadeLines\Q31", r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\Q31_DirectionalMeanHS", "DIRECTION", "Id")  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))  
  
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

In [52]:

```
arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError
```

```
Traceback (most recent call last)
```

```
In [52]:
```

```
Line 1:     arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\HillshadeLines\Q26_", r"C:\Users\danie861\Desktop\FinalProject\Final  
Project\Default.gdb\Q26_DirectionalMeanHS", "DIRECTION", "Id")
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionalMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))
```

```
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

In [53]:

```
arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError
```

```
Traceback (most recent call last)
```

```
In [53]:
```

```
Line 1:     arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\HillshadeLines\Q24_", r"C:\Users\danie861\Desktop\FinalProject\Final  
Project\Default.gdb\Q24_DirectionalMeanHS", "DIRECTION", "Id")
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionalMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))
```

```
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

In [54]:

```
arcpy.stats.DirectionalMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError
```

```
Traceback (most recent call last)
```

```
In [54]:  
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\HillshadeLines\P26_", r"C:\Users\danie861\Desktop\FinalProject\Final  
Project\Default.gdb\P26_DirectionalMeanHS", "DIRECTION", "Id")  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))  
  
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

```
In [55]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError                                         Traceback (most recent call last)  
In [55]:  
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\HillshadeLines\P25", r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\P25_DirectionalMeanHS", "DIRECTION", "Id")  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1710:     raise e  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:  
Line 1707:     retval = convertArcObjectToPythonObject(gp.DirectionMean_stats(*gp_fixargs  
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda  
a>:  
Line 512:     return lambda *args: val(*gp_fixargs(args, True))  
  
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1  
feature(s) to compute results.  
Failed to execute (DirectionalMean).
```

```
In [49]: arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalProject\Defau
```

```
-----  
ExecuteError                                         Traceback (most recent call last)  
In [49]:  
Line 1:     arcpy.stats.DirectionMean(r"C:\Users\danie861\Desktop\FinalProject\FinalP  
roject\Default.gdb\HillshadeLines\P24_", r"C:\Users\danie861\Desktop\FinalProject\Final  
Project\Default.gdb\P24_DirectionalMeanHS", "DIRECTION", "Id")  
  
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
```

```
Line 1710: raise e
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\stats.py, in DirectionalMean:
Line 1707: retval = convertArcObjectToPythonObject(gp.DirectionalMean_stats(*gp_fixargs
((Input_Feature_Class, Output_Feature_Class, Orientation_Only, Case_Field), True)))
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda>:
Line 512: return lambda *args: val(*gp_fixargs(args, True))
```

```
ExecuteError: ERROR 000641: Too few records for analysis. This tool requires at least 1
feature(s) to compute results.
Failed to execute (DirectionalMean).
```

Perfrom Linear Directional Mean Operation on Stream Network:

```
In [ ]: arcpy.stats.DirectionalMean("streams", r"C:\Users\danie861\Desktop\FinalProject\FinalPr
```

Join IDs from Linear Directional Mean Operation and Group Layers for Statstical Prodecure(s) in Next Steps

Join Stream ArcID to Aspect Lineament ID:

```
In [57]: arcpy.management.JoinField("streams_DirectionalMean", "ARCID", "AspectLinear_Directiona
```

Out[57]: **Output**

a Layer object

Messages

Start Time: Monday, November 28, 2022 11:22:51 AM

Succeeded at Monday, November 28, 2022 11:22:54 AM (Elapsed Time: 2.98 seconds)

Join Stream ArcID to Hillshade Lineament ID:

```
In [2]: arcpy.management.JoinField("streams_DirectionalMean", "ARCID", "HillshadeLinear_Directi
```

```
ExecuteError Traceback (most recent call last)
```

```
In [2]:
```

```
Line 1: arcpy.management.JoinField("streams_DirectionalMean", "ARCID", "HillshadeLi
near_DirectionalMean", "Id", None)
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\management.py, in JoinField:
Line 8015: raise e
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\management.py, in JoinField:
Line 8012:     retval = convertArcObjectToPythonObject(gp.JoinField_management(*gp_fixargs
((in_data, in_field, join_table, join_field, fields), True)))
```

```
File C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing\_base.py, in <lambda>:
Line 512:     return lambda *args: val(*gp_fixargs(args, True))
```

ExecuteError: Failed to execute. Parameters are not valid.
ERROR 000728: Field Id does not exist within table
Failed to execute (JoinField).

Join Stream ArcID to Slope Lineament ID:

```
In [ ]: arcpy.management.JoinField(r"MainLDM\streams_DirectionalMean", "ARCID", r"MainLDM\Slope
```