

Motifs and Moccasins

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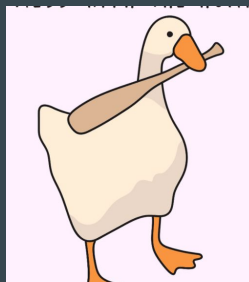
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Intro to Team



Jazmyne

Coding,
coding
presenter



Damaris

Slides presenter,
moccasins
research



Alicia

Coding
explanations,
coding



Rashini

Slides formatting,
Claire Heckle's Data
research

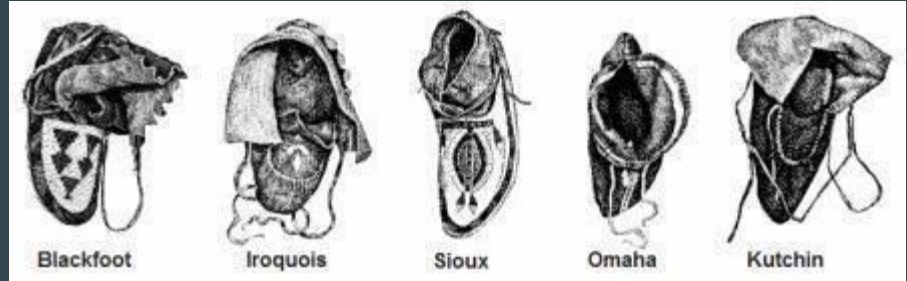
Moccasins:

Moccasins were the footwear most worn by Native Americans

The word was originated from the Algonquin word “makisin” meaning shoe.

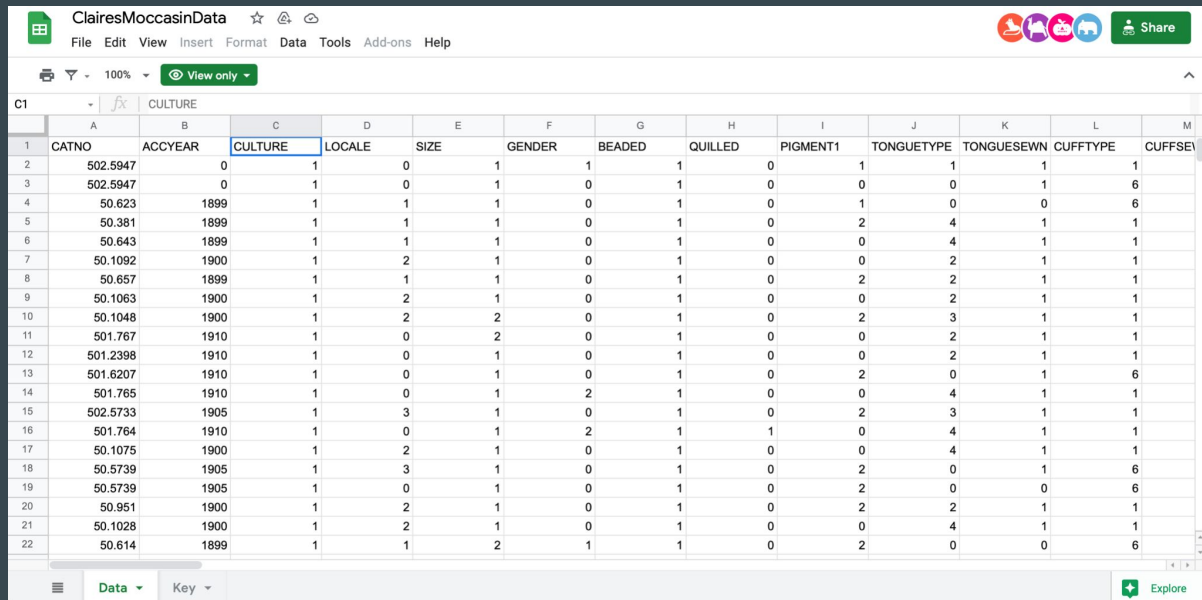
They were made of soft leather and had no heel which made it easier for nomadic Indians to hunt and gather.

Each tribe had its own style of making moccasins, which helped Native Americans to identify a tribe by their footmarks on the ground.



Intro to Claire Heckel's Data:

Claire Heckel is an archaeologist who studied and researched science in the study of prehistoric art. She created a data set based of her research, to show how the moccasins structures changed and developed over time. The data sets include characteristics such as cultures, genders, size, pigments, and laces, etc. According to the data, over the years, the number of cultures that wore moccasins increased.



The screenshot shows a spreadsheet titled "Claire'sMoccasinData" with a menu bar (File, Edit, View, Insert, Format, Data, Tools, Add-ons, Help) and a toolbar with icons for print, zoom (100%), and view options (View only). The data is organized into columns labeled A through M, with row numbers 1 through 22. The columns are: A (CATNO), B (ACCYEAR), C (CULTURE), D (LOCALE), E (SIZE), F (GENDER), G (BEADED), H (QUILLED), I (PIGMENT1), J (TONGUETYPE), K (TONGUESEWN), L (CUFFTYPE), and M (CUFFSEW). The data shows various moccasin entries with their respective characteristics.

	A	B	C	D	E	F	G	H	I	J	K	L	M
	CATNO	ACCYEAR	CULTURE	LOCALE	SIZE	GENDER	BEADED	QUILLED	PIGMENT1	TONGUETYPE	TONGUESEWN	CUFFTYPE	CUFFSEW
1													
2	502.5947	0	1	0	1	1	1	0	1	1	1	1	1
3	502.5947	0	1	0	1	0	1	0	0	0	1	6	6
4	50.623	1899	1	1	1	0	1	0	1	0	0	6	6
5	50.381	1899	1	1	1	0	1	0	2	4	1	1	1
6	50.643	1899	1	1	1	0	1	0	0	4	1	1	1
7	50.1092	1900	1	2	1	0	1	0	0	2	1	1	1
8	50.657	1899	1	1	1	0	1	0	2	2	1	1	1
9	50.1063	1900	1	2	1	0	1	0	0	2	1	1	1
10	50.1048	1900	1	2	2	0	1	0	2	3	1	1	1
11	501.767	1910	1	0	2	0	1	0	0	2	1	1	1
12	501.2398	1910	1	0	1	0	1	0	0	2	1	1	1
13	501.6207	1910	1	0	1	0	1	0	2	0	1	6	6
14	501.765	1910	1	0	1	2	1	0	0	4	1	1	1
15	502.5733	1905	1	3	1	0	1	0	2	3	1	1	1
16	501.764	1910	1	0	1	2	1	1	0	4	1	1	1
17	50.1075	1900	1	2	1	0	1	0	0	4	1	1	1
18	50.5739	1905	1	3	1	0	1	0	2	0	1	6	6
19	50.5739	1905	1	0	1	0	1	0	2	0	0	6	6
20	50.951	1900	1	2	1	0	1	0	2	2	1	1	1
21	50.1028	1900	1	2	1	0	1	0	0	4	1	1	1
22	50.614	1899	1	1	2	1	1	0	2	0	0	6	6

Hypothesis:

We feel that the primary colors will appear the most in the moccasins because red seems to be a very prominent color in Native American heritage and the green and the blue signify their link with nature.



Project Goal:

- Our project goal was to explore the different color combinations and motifs for moccasins using Claire Heckel's data.

Why Code?

- Using code helped us to handle all of Claire Heckel's data more efficiently, then if we were to analyze each piece of moccasin data individually.

Code

```
[ ] from google.colab import drive
drive.mount('/content/drive')
```

Mounted the drive to have access to files

```
[ ] import pandas as pd
moccasins = pd.read_csv("/content/drive/MyDrive/Colab Notebooks/ClairesMoccasinData - Data.csv")
three_motif = open("/content/drive/MyDrive/Colab Notebooks/3_motif_combos.txt").read()
four_motif = open("/content/drive/MyDrive/Colab Notebooks/4_motif_combos.txt").read()
five_motif = open("/content/drive/MyDrive/Colab Notebooks/5_motif_combos.txt").read()
```

Imported the pandas dataframe to analyze the data

Open and read into the csv file

Used the .read() function to read data written to the file

```
[ ] moccasins.head()
```

Used the .head() function to display the first 5 rows

	CATNO	ACCYEAR	CULTURE	LOCALE	SIZE	GENDER	BEADED	QUILLED	PIGMENT1	TONGUETYPE	TONGUESEWN	CUFFTYPE	CUFFSEWN	LACES
0	502.5947	0	1	0	1	1	1	0	1	1	1	1	0	0
1	502.5947	0	1	0	1	0	1	0	0	0	1	6	0	0
2	50.623	1899	1	1	1	0	1	0	1	0	0	6	1	1
3	50.381	1899	1	1	1	0	1	0	2	4	1	1	0	0
4	50.643	1899	1	1	1	0	1	0	0	4	1	1	0	1

5 rows x 91 columns

Code

```
[ ] motifs = moccasins.loc[moccasins["CULTURE"] == 5].iloc[:,55:90]
motifs.head()
```

Used the head() function to display the rows

Used the loc attribute to get the 5 rows with the "CULTURE" label. Used the .iloc attribute to get the rows at the specified index.

	MOTIF_ANTELOPEHOOF	MOTIF_ARROW	MOTIF_BIRD	MOTIF_BOX	MOTIF_BOXPLOT	MOTIF_CHECKER	MOTIF_CHEVRON	MOTIF_CROSSBAR	MOTIF_DIAMO9	MOTIF_DRAGONFLY
79	0	0	0	0	0	0	0	0	0	0
80	0	0	0	1	0	0	0	0	0	0
81	0	0	0	1	0	0	0	0	0	0
82	0	0	0	0	0	0	0	0	0	0
83	0	0	0	0	0	0	1	0	0	0

```
[ ] two_color = open("/content/drive/MyDrive/Colab Notebooks/2_color_combos.txt") #open the file
twoColor = [] # make an empty list to put each line of colors in
for line in two_color: # for each line ...
    twoColor.append([line.strip()]) # ... append the contents of the line as a list (that is why the [] around line.strip() are there)
print(twoColor)
```

```
[ ] three_color = open("/content/drive/MyDrive/Colab Notebooks/3_color_combos.txt") #open the file
threeColor = [] # make an empty list to put each line of colors in
for line in three_color: # for each line ...
    threeColor.append([line.strip()]) # ... append the contents of the line as a list (that is why the [] around line.strip() are there)
print(threeColor)
```

Code

```
[ ] four_color = open("/content/drive/MyDrive/Colab Notebooks/4_color_combos.txt") #open the file
fourColor = [] # make an empty list to put each line of colors in
for line in four_color: # for each line ...
    fourColor.append([line.strip()]) # ... append the contents of the line as a list (that is why the [] around line.strip() are there)
print(fourColor)
```

```
[ ] def colorCombo (dataframe, Category):
    colorPick = drop1.loc[drop1["CATNO"]== Category]
    colorPick = colorPick.to_string(index = False)
    for i in colors:
        if i == twoColor:
            print(twoColor[i])
        elif i == threeColor:
            print(threeColor[i])
        elif i == fourColor:
            print(fourColor[i])
        # else:
        #     print(fiveColor[i])
    return colorPick
```

Defined the function, followed by the parameters

Used .loc attribute to access the "CATNO" row from the adjusted data from the drop1 function

```
[ ] colorCombo(drop1, 502.5947)
```

```
'Empty DataFrame\nColumns: [CATNO, ACCYEAR, CULTURE, BLACK, TR_CRYSTAL, WHITE, PINK, TR_RED, RED, TR_DKRED, ORANGE, YELLOW, TR_ORANGE, TR_YELLOW, DKYELLOW,
TR_TOPAZ, BROWN, TR_DKBROWN, TR_GREEN, LTGREEN, TR_MEDGREEN, GREEN, TR_PEACOCKBL, TURQUOISE, LTBLUE, POWDERBLUE, TR_TURQBLUE, STEELBLUE, MEDBLUE, ROYALBLUE,
TR_COBALT, NAVYBLUE, TR_DKMTBLUE, TR_DKPURPLE, LAVENDER, SEAGREEN, FACETBRASS, REDWHITEINT, MOTIF_ANTELOPEHOOF, MOTIF_ARROW, MOTIF_BIRD, MOTIF_BOX, MOTIF_BO
XPLOT, MOTIF_CHECKER, MOTIF_CHEVRON, MOTIF_CROSSBAR, MOTIF_DIAMO9, MOTIF_DRAGONFLY, MOTIF_ELKHOOF, MOTIF_HOURLASS, MOTIF_FEATHER, MOTIF_FILLEDUP, MOTIF_FUL
LPOINTS, MOTIF_HALFSTAR, MOTIF_HEARTLUNGS, MOTIF_HORSETRACKS, MOTIF_IBAR, MOTIF_LEAF, MOTIF_LIGHTNING, MOTIF_LONGCHECKER, MOTIF_MORNINGSTAR, MOTIF_MOUNTAIN,
MOTIF_POINTS, MOTIF_RABBITEARS, MOTIF_RABBITTRACKS, MOTIF_SLANTBAR, MOTIF_SQUARECROSS, MOTIF_STRIPES, MOTIF_TIPI, MOTIF_TRIANGLES, MOTIF_TURTLE, MOTIF_TWIST
ED, MOTIF_VERTEBRAE, OTHER]\nIndex: []'
```

Conclusions

- We are unsure if our hypothesis was correct or not
- We need more time to better understand the project
- Communication is key

Challenges

- Our first challenge was trying to figure out how to go about the task
- Our biggest challenge was trying to figure out the “perfect” function and trying to get it to work

Solutions

- We came together as a group and brainstormed what we should do to go about the challenge
- We have not yet found the “perfect” function, but we did still try our hardest using trial and error

Next Steps

- More time to work on the function
- Use the results to bring attention to Indigenous culture

Thank
you!