DSCI 310: Historical Horse Population in Canada

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1 Aim

This project explores the historical population of horses in Canada between 1906 and 1972 for each province.

2 Data

Horse population data were sourced from the Government of Canada's Open Data website (Government of Canada 2017a, 2017b).

3 Methods

The Python programming language (Van Rossum and Drake 2009) and the following Python packages were used to perform the analysis: pandas (McKinney 2010), altair (VanderPlas 2018), click (Team 2020), as well as Quarto (Allaire et al. 2022).
Note: this report is adapted from Timbers (2020) (Timbers 2020).

4 Results

Figure 1 shows the horse populations for all provinces in Canada.

Figure 1: Horse populations for all provinces in Canada from 1906 - 1972
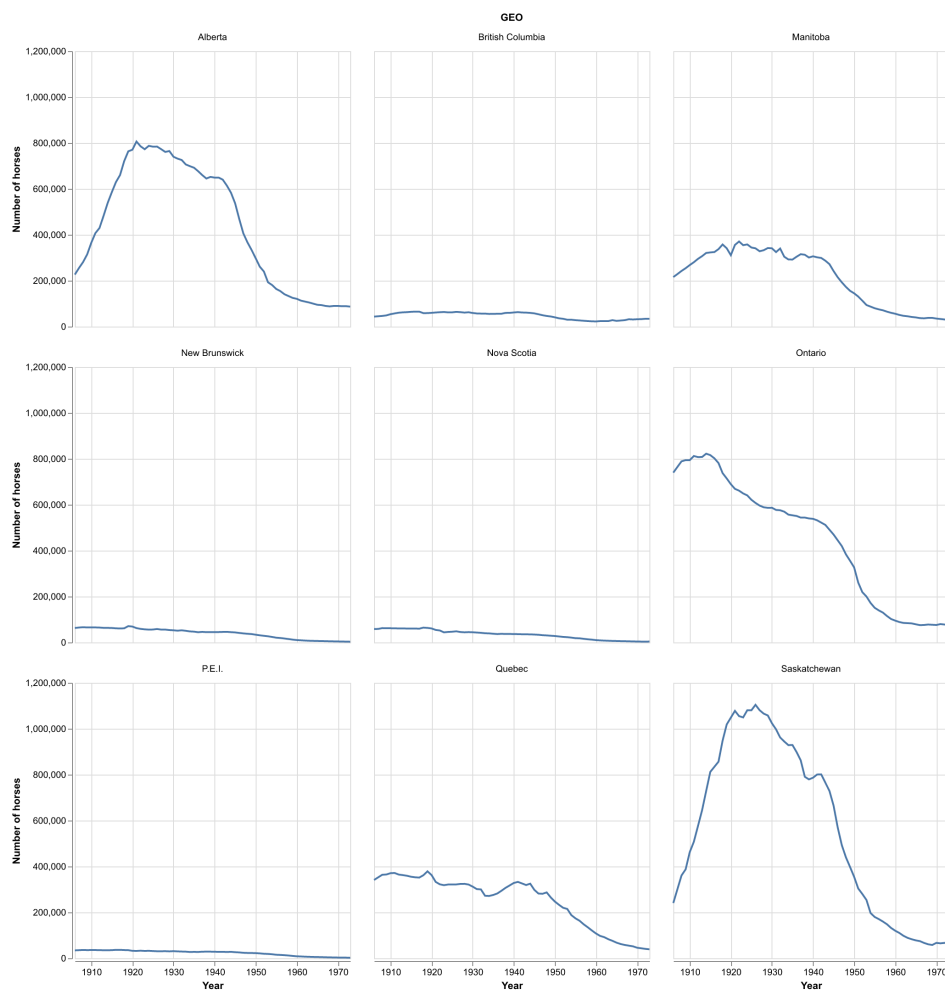
As seen in Figure 1, Ontario, Saskatchewan, and Alberta have had the highest horse populations in Canada.

## 4.1 Standard Deviation of Horse Populations

We present the standard deviations in **Table 1** below.

Table 1: Standard Deviation of Horse Populations

Province	Std
Saskatchewan	377265.6
Ontario	266435.3
Alberta	266063.2
Manitoba	122403.9
Quebec	111411.1
New Brunswick	22019.5
Nova Scotia	19879.3
British Columbia	14945.7
P.E.I.	11355.7

As seen in **Table 1**, the province with the highest spread of horse populations is **Saskatchewan**.

Figure 2: Horse populations for the province with the largest standard deviation

Historical number of horses in Saskatchewan
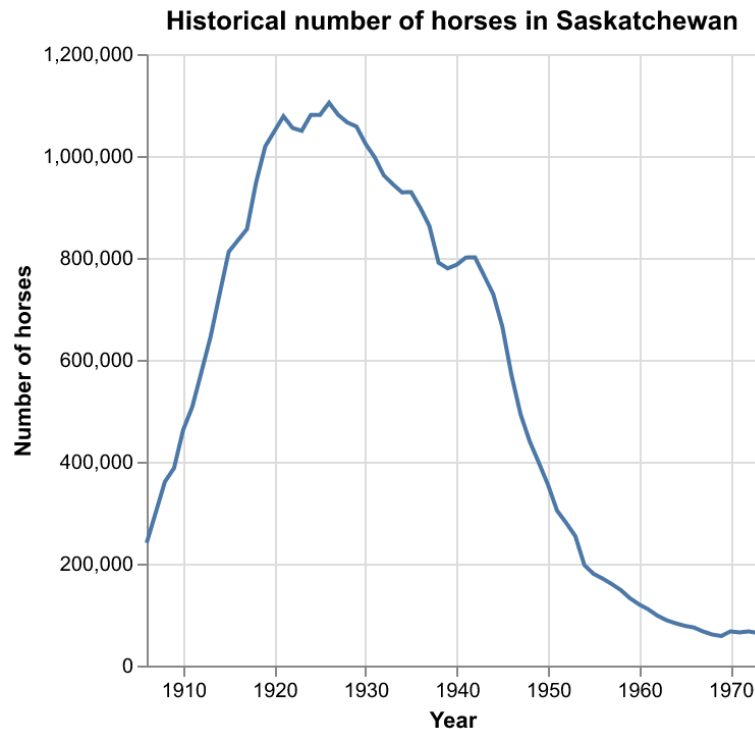
In **Figure 2**, we zoom in and analyze the province of **Saskatchewan**, which had the highest variation in horse populations over time.

5 References

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