Data 227 - Autumn 2021 HW 3

Data Visualization and Communication - Trimble

Due: **delayed** Thusday, October 21, 2021 12:00pm (noon)

Homework 3, Data wrangling, CDC Birth and infant death database

1. For this assignment, you will create a static visualization from the CDC birth database.

   The CDC, for fifty years, has been compiling data about each birth in the United States, making most of the data from these standard forms available.

   This data consists of about 50 fields, almost all of which are categorical data referring to geography, presence of absence of risk factors, method of delivery, duration of gestation, age of parents, date of birth... This will require some amount of effort to wrangle.

   There are 2-4 million births per year, and, if you desire to examine mortality, around 20,000 infant deaths. The CDC started obfuscating the exact day of birth at some poi

   There are, for instance, considerable effects for birth rate by day of the week, day of the year (Jan 1 is not a popular day to be born) and for infant mortality by method of delivery. There are patterns of maternal and paternal age, gestational duration, and maternal race as it relates to the infant mortality outcome.

   `https://www.cdc.gov/nchs/data_access/vitalstatsonline.htm`

   For instance, births for calendar year 2000 are explained here:

   `https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/DVS/natality/Nat2000doc.pdf`

   and the data file is here:

   `https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/DVS/natality/Nat2000us.zip`

   Examine the data, find a fact that is contained within the data, and design a visualization that communicates that fact.

   Include a figure caption and just one paragraph discussing your findings and the graphical design. Attach any code you used to produce the visualization. The figure caption should describe the origin of the dataset.

   You do not have to use any specific tools to produce the visualization (you could even draw it by hand) but you need to find something interesting and display it effectively.