Suffering from Whiplash?
The Effects of Pencil Whipping on Data Variability in the Safety Industry
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This study will attempt to identify certain signs of pencil-whipped data and investigate the effects of pencil whipping on data variability and analysis.

Background
- **Pencil Whipping**
  - When an employee doesn’t carry out necessary work required to complete a safety checklist. (Ludwig, 2014)
  - Causes a lack in variability

- **Big data** is increasingly being used to predict trends, and future events.
  - Includes: volume, velocity, variety, variability, and complexity (Statistical Analysis System, 2019)

Methods
- Data from American Fortune 500 company
- Inspect data for signs of pencil whipping/variability

Implications
Our analysis will:
- Demonstrate necessity of reducing pencil whipping
- Create a predictive solution to safety issues
- Reduce injuries/fatalities
- More accurately represent observed safety behaviors

 Visualization of Pencil Whipping