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| [InterviewQs](http://url4828.interviewqs.com/ls/click?upn=qwT-2Bl0U064-2B7oRNpPgUya7ecPmGRwE2khpP-2F5cNr-2FmX-2B6PqYxRHzWlRa-2B8ecgLBA9-2BqgBN6N-2BlN6LynvPDDX8gP5GJnL7P-2FdFw86KOd0IkE-3DvpGJ_IX5HKWnhXeILdZHF1orS-2BlB9GK8lB7SYfPoy-2FMuH4KRohMZLpajhsnIOVcXh9Dl1-2FEM0gexeUVi2uV8saiYk-2BIoemGnh34m-2BtT-2BROOE0Lc-2Bkopd6Z27bKGuv7dOuQ73sXkNsOgMybAyt1cBiJAwdfrsAeeJh5bJa8Hot90W16qZ7R-2BtpW-2FgA186GOcU67cb6YdKe2BG5fxutFzGYnYRYbtKbzQ-2FOLShSt9dtdO3mYYiuOZt5q1w7jdE5-2BjjypZMmNg7eUwcKGxPUagJy4UDH1v67L68mYYQiq-2F5MAGGUsECiNLz7zaptPVySKRlJsqnLBFILLWSWbat9SEdgV79RRNdttqKrhsr5EET0JDQhNr2s-2BnyBP-2BJaMLPknvqSs2cM) |

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| **Judging smiles** |

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| ***Statistics, Box Plot, Data Visualization, External Dataset*** |

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| It's often hypothesized (and backed in some studies) that smiling can increase leniency, or reduce the effects of wrongdoing among other benefits.  A 1995 study by Marianne LaFrance & Marvin Hecht produced a [dataset](http://url4828.interviewqs.com/ls/click?upn=qwT-2Bl0U064-2B7oRNpPgUya0M9CbLWlzdVtmktX-2FbfOxEzAv-2F4Lc5Mo1QJts6KHCPwdu-2Fsi9PNZIWjFCex7bx2O19xahFpYOBDH-2FfZ7zJVBR2VH33AY0R20rA-2BGGZXQtzgSYsPXZ4BGk27BIliI7-2BOYUCpuCFJ69YcIpkRRyNxTvU-3D-alz_IX5HKWnhXeILdZHF1orS-2BlB9GK8lB7SYfPoy-2FMuH4KRohMZLpajhsnIOVcXh9Dl1-2FEM0gexeUVi2uV8saiYk-2BIoemGnh34m-2BtT-2BROOE0Lc-2Bkopd6Z27bKGuv7dOuQ73sXkNsOgMybAyt1cBiJAwdfrsAeeJh5bJa8Hot90W16qZ7R-2BtpW-2FgA186GOcU67cb6YdKe2BG5fxutFzGYnYRYbtKbzQ-2FOLShSt9dtdO3mYYhICJd-2FljPDHvKJNVMhyPY01roX-2BpdspbbUrlRIuPauBho4aNc5mJ1FU1lCfXdYDPunDK-2FtWuwcNXLJA4JcBcvyWbPyfUEQ3H7gdD3zLdd9lDS8DU4jMhwFItbNA-2FFTaS5YXOZEt7Qlv5lT85PWtxHg) containing 4 different types of smiles, as well as the judge's leniency against judging wrongdoing when seeing these smiles.  The dataset can be interpreted as follows:  **Smile:**   * 1 - false smile * 2 - is felt smile * 3 - is miserable smile * 4 - is neutral control   **Leniency:** a measure of how lenient the judgments were, higher means the judges were more lenient  Given the above information:   * Plot the leniency by smile type in a parallel box plot * Based on the box plot above, which smile condition resulted in the highest leniency? * Is the median leniency for the false smile lower than the 75th percentile leniency score for the neutral expression?   Below is code to import the dataset into a Google Colab or Jupyter notebook to help get you started:    # Here is code to pull the dataset and relevant libraries    # into a Google Colab or Jupyter notebook to help get you started    import matplotlib.pyplot as plt    import numpy as np    import pandas as pd    import seaborn as sns    df = pd.read\_csv('<https://raw.githubusercontent.com/erood/interviewqs.com_code_snippets/master/Datasets/smile_leniency.csv>')    df.head() |