## Trump's Top 10,000 Tweets Since He Started Running for President, by Retweet (WIP)

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$$\rho_{X,Y} = \frac{\mathbb{E}[XY] - \mathbb{E}[X]\mathbb{E}[Y]}{\sqrt{\mathbb{E}[X^2] - (\mathbb{E}[X])^2}\sqrt{\mathbb{E}[Y^2] - (\mathbb{E}[Y])^2}}$$

$$= \frac{\mathbb{E}[(X - \mu_X)(Y - \mu_Y)]}{\sigma_X \sigma_Y}$$

$$= \frac{cov(X,Y)}{\sigma_X \sigma_Y}$$
(3)

$$= \frac{\mathbb{E}\left[ (X - \mu_X)(Y - \mu_Y) \right]}{\sigma_X \sigma_Y} \tag{2}$$

$$=\frac{cov(X,Y)}{\sigma_X \sigma_Y} \tag{3}$$

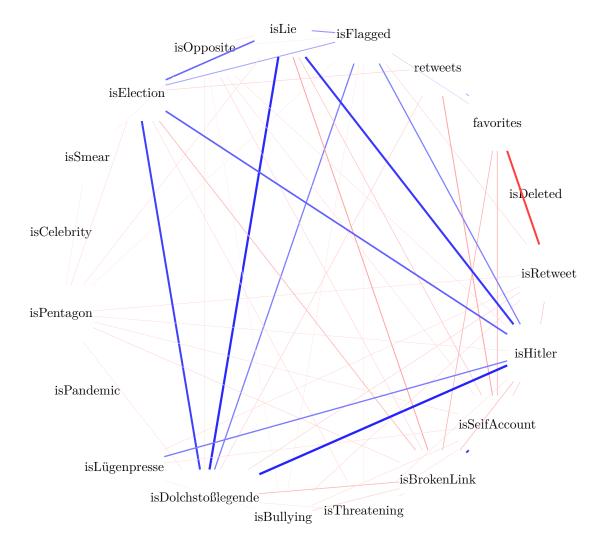


Figure 1: Graph visualization of Pearsons correlation coefficient with sample counts.

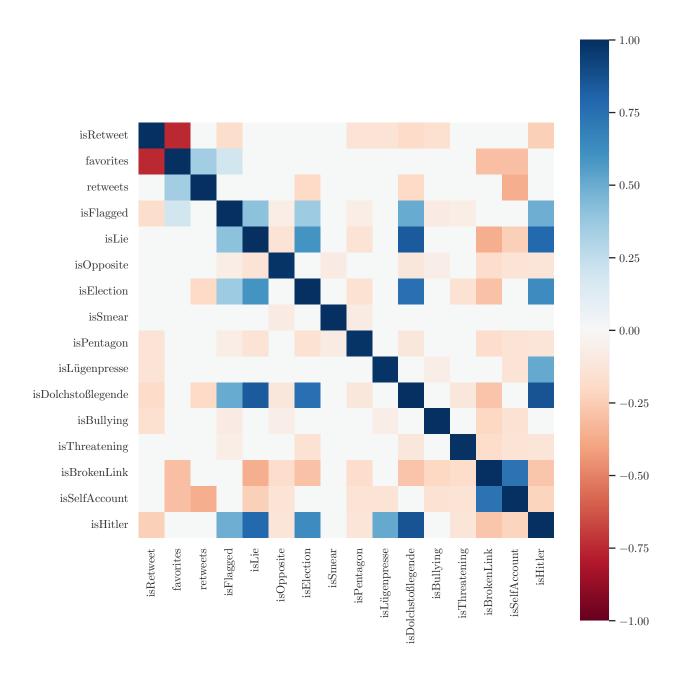


Figure 2: Matrix visualization of Pearsons correlation coefficient.