This research demonstrates and analyses a quantitative approach to literary criticism in the Digital Humanities by predominantly aiming to answer the question: is there a clearly distinguishable female writing style that is a shared foundation of female author’s novels in the Victorian period? In order to achieve this goal, a number of steps had to be taken. First, a foundation for this research's case study was established by explaining the socio-cultural history of women writers in the Victorian period and by detailing the history of the Digital Humanities and computational research. Secondly, the compilation of the corpus and the methodology of the case study were elaborately explained and all decisions justified. The predominant terminology – the terms writing style and gender – were clarified as well in order to exclude confusion or multiple interpretations of these elements. Thirdly, the results of the case study were presented and interpreted. Here a conscious decision was made to only discuss these outliers briefly instead of examining them with close reading as this study predominantly focused on similarities instead of abnormalities in writing style between women in the Victorian period. Lastly, the limits of this study were discussed in detail and suggestions for future research were made.