

The Bullying Game: Sexism Based Toxic Language Analysis on Online Games Chat Logs by Text Mining

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Abstract

As a unique type of social network, the online gaming industry is a fast-growing, changing, and men-dominated field which attracts diverse backgrounds. In the online gaming communities, most women players report toxic and offensive language or verbal abuse against them. Observing and reporting the toxic behavior, sexism, harassment that occur as a critical need in preventing cyberbullying and help gender diversity and equality grow in the online gaming industry. However, the research on this topic is still rare, except for some milestone works. By the aim of contributing to the theory and practice of sexist toxic language detection in the online gaming community, we focus on the analysis and automatic detection of toxic comments in online gamers' communities context. As an analytical system proposal to reveal sexist toxic language in online gaming platforms, we adapted QCA by MaXQDA tool. Also, we applied Naïve Bayes Classifier for text mining to classify if a chat log content is sexist and toxic. We also refined the text mining model with Laplace estimator and re-tested the model's accuracy. Data visualization techniques also provided the most toxic words used against women in online gaming communities. The study also revealed that the NB classifier's accuracy rate did not change by the Laplace estimator. Findings are expected to raise awareness about gender-based toxic language usage. Applying the proposed mining model can inspire similar research and practical immediate solutions on easing the moderation and disinfection of these communities from gender-based discrimination and sexist bullying.

Keywords: Online Games Chat Logs, Toxic language, Sexism, Text Mining, Naïve Bayes Classifier.