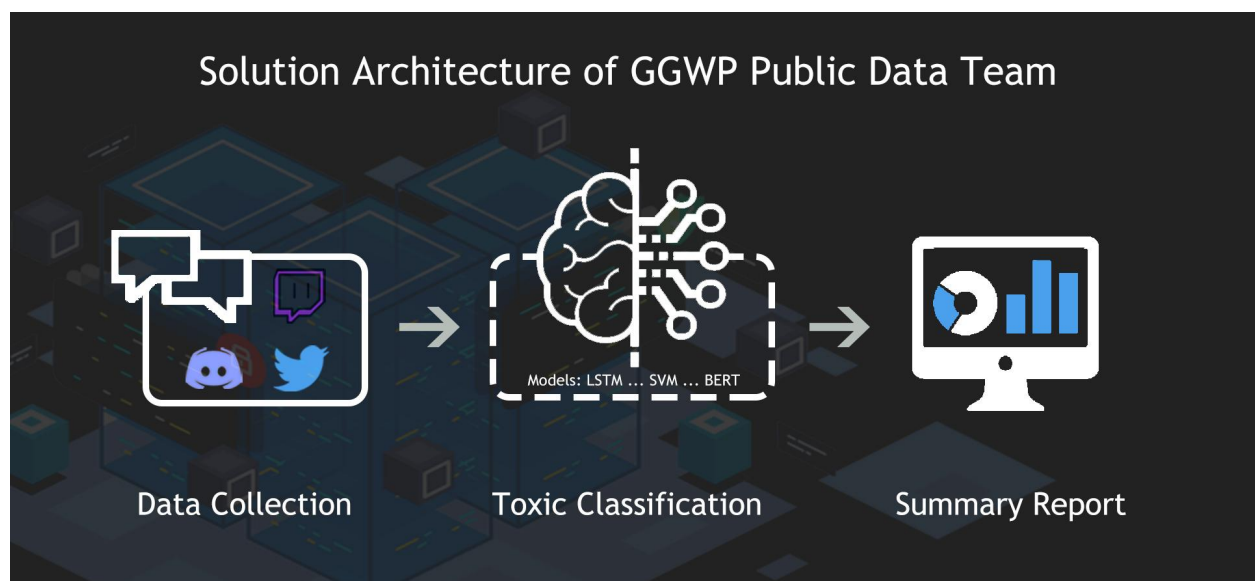


[GGWP: Analyzing Game Toxicity through Public Data]

A survey conducted by Anti-Defamation League and Newzoo revealed that 70% of US online gamers have experienced harassment. Toxicity acts as a fatal poison, spreading quickly and driving away existing and potential players. Addressing toxicity swiftly is therefore especially important for game developers hoping to see their games succeed long-term. Company GGWP was born for this. “Good Game, Well Played. GGWP’s mission is to create and nurture positivity in video games that people around the world enjoy everyday,” said George Ng, Chief Technology Officer of GGWP. “We want to strengthen friendships, grow communities, and bring gamers together through reinforcement of positive actions.” This year GGWP invited a group of five UC Berkeley students to participate in a project focusing on toxicity in game communities on some popular social platforms.



The team specifically worked on scraping, cleaning, and analyzing public chat logs on Twitch, Twitter and Discord. Students in the team utilized their specialty in data science to build efficient web scraping, data cleansing, and modeling procedures. Machine learning models, including but not limited to Long-Short Term Memory, Support Vector Machine and Bidirectional Encoder Representations from Transformers, were trained to perform multi-label classification for different types of toxicity. Through in-depth study of model results, the team was able to figure out the toxicity level within each community and compare the results across different platforms and games. To make the project results accessible to non-specialists, the team designed summary reports with visualizations and interpretation.

Although the project focused on multiplayer games, such as League of Legends and PlayerUnknown's Battlegrounds, results can be easily generalized to any type of video games that have online game communities. The team's goal is to help users and clients better understand the environment of their interested gaming communities and facilitate decisions related to operational strategies. “As for next steps, getting user personas would be interesting.

It would also be helpful to build a topic summarizer and check if the toxicity level is high for certain topics.” the team said. “Game developers need proper tools to foster positivity within their communities. There are a lot more we can do and we are happy to work on it.”

Learn more about GGWP at <https://www.ggwp.com/>.

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Github: <https://github.com/pl2599/GGWP-Toxic-Behavior>