Burnout in IT sector

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Until this year, 2019, burnout was present in almost all the industries, but nobody know what it really was, until the World Health Organization recognized it as an official medical diagnosis. This means that everybody who feels like burned out should go to a doctor to be treated correctly.

Our main goal is to get a more clear understanding of the burnout, mostly in the IT industry, and to figure out some other methods with higher performance, that can be used for its detection. Among the methods that we tested is the survey, which was the only way of detection in every industry. Inspired from other surveys, we developed our own survey, which we used effectively to detect persons with burnout. Another method that we tested is the VAD (valence, arousal, dominance) [1] score using a VAD lexicon on the stackoverflow database, with lower success.

The other two methods that we tested, are based on artificial intelligence. The NLC (Natural Language Classifier) and the NLU (Natural Language Understanding) both can be found between the IBM services, and thats what we used. The NLC is a model that can classify text written by humans based on its structure and meaning. The model is freely trained, so we created a corpus from texts which have burnout and texts without burnout, and we trained our model with it. After training the model, it was able to detect every text with burnout, but it made some mistakes by classifying text to burnout which did not contain burnout. The NLU is a model, that can detect many features from a text, and sentiment is one of them. Analyzing our corpus with the NLU we discovered, that every text with burnout had negative sentiment, but not just negative emotions. The texts without burnout came out with mixed results.

The survey is a method that can be used by itself for detecting burnout, but as our experience shows people dont like completing surveys which makes it hard to detect with this method. The methods that we tested contribute to the creation of some other methods, which can be used for burnout detection with higher performance without the need of a survey.

References

[1] Mika Mantyla, Bram Adams, Giuseppe Destefanis, Daniel Graziotin, Marco Ortu, Mining valence, arousal, and dominance: possibilities for detecting burnout and productivity?, Proceedings of the 13th International Conference on Mining Software Repositories, May 14-22, 2016, Austin, Texas [doi:10.1145/2901739.2901752]