Company ESG Ratings' Explanatory Prediction

Level	Master
Prerequisites	Good experience with Python, basics of deep learning
Category	Natural Language Processing, Deep Learning, Economics
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Environmental, social and governance (ESG) engagement of companies moved into the focus of public attention over recent years. With the requirements of compulsory reporting being implemented and investors incorporating sustainability in their investment decisions, the demand for transparent and reliable ESG ratings is increasing. However, automatic approaches for forecasting ESG ratings have been quite scarce despite the increasing importance of the topic. The objective of this thesis is to design and build a model to predict ESG ratings from news articles using deep learning. The model should indicate the features that are responsible for particular ratings of a company hence contributing to transparent and explanatory output that allows for gaining insights what a given company should improve.

A news dataset for about 3,000 US companies (2018-2020) together with their ESG ratings is made available, as well as the code of a preliminary model based on CNN and transformers architecture (which could be used aa s foundation for building a more refined explanatory approach).