Team Name: DeepHate.py

Team Members and email addresses:

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Project Description (150-250 words)

Predictive Behavioral Modelling software that will integrate deep learning neural networks (MIT’s DeepMoji and IIT-Hyderabad’s Deep Learning for Hate speech identification network) with analysis of given user’s relationship networks from twitter and liked-page object network from Facebook to predict likelihood that user may engage in discriminatory behaviors and risk adverse outcomes to their employer.

The end result is a web-based application intended for use by HR departments and hiring managers (herein referred to as the customer) to screen the social media presences of prospective employees for indicators of hate speech/latent hateful ideology that may arise in unbecoming circumstances both within the company or in public view. By providing an automated, quantitative means for analyzing the social media of prospective hires, the customer would insulate themselves from legal risks of discovering protected information via social media screening, as would occur if such screenings were performed manually by the customer during pre-employment background checks.

Project Milestones

· 3-5 specific and measurable objectives per semester for first & second semester

Fall Semester.

1. Complete Dynamic Data-set generation scripts -- November 2nd
2. Finalize mathematical model used to make prediction from raw input data (Sets of tweets, user’s relationship graphs, facebook object graph) -- November 15th.
3. Initial web page diagramming -- December 3rd
4. Code review of DeepMoji and Deep Learning for Hate Speech ID LSTM implementations -- December 10th
5. Initial Backend diagram/design completion -- ~December 15th

Spring Semester:

1. Complete initial deployment of back-end -- January 8th
2. Complete front-end design -- January 8th
3. Connect Front and Back ends -- January 27th
4. Initial testing and model validation via front-end -- February 13th.
5. Complete final form front end GUI.

· Both implementation and documentation milestones

Project Budget

1. Monthly amazon web service -- in the event that server construction is too cost-prohibitive, AWS may be necessary, assuming that AWS instances exist that have compatible versions of tensorflow -- more research is needed to project monthly compute costs.
2. Create our own server: <https://pcpartpicker.com/user/dxzc1381/saved/tr9NNG>

Meeting time with TA (Amir):

Monday Lab -- 11:00am- 12:50pm.

Work Plan

Front End/Web App

Jacob, Manan

Neural Nets & Graph Analysis design/implementation

David, Matt.

Github link:

https://github.com/dsca1729/581\_team12\_17-18