

MACHINE LEARNING PREDICTION OF POLITICAL ORIENTATION USING FACEBOOK PROFILE PICTURES

DATA586 Project Report

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1 Introduction

The dataset constructed for this analysis was obtained from Facebook. Facebook profile IDs were scraped from new members of 2 Facebook “Groups”: republicans from [Republicans in Texas](#), and democrats from [Democratic Voices for Biden/Harris 2024](#). The python API wrapper [facebook-scraper](#) was used to obtain URLs to each user’s profile picture. Then, profile pictures were scanned for faces and cropped to a common size of 120 x 120 pixels using the Haar Cascades facial detection algorithm.

Finally, faces were assigned X facial attributes using Y.

Assumptions of the following analysis due to the method of dataset construction are as follows:

- “Democrats” and “republicans” are good proxies for “liberal” and “conservative”, respectively.
- Democrats/republicans on Facebook are representative of democrats and republicans in general.
- Users that set profiles pictures of themselves versus of a non-face picture do not have different facial attributes.