Police Bot: Enhancing Social Media Governance with Policing Bots

Milestone 4 Presentation

Group Members:

Students:

- Gabriel Silva
- Cody Manning
- Liam Dumbell
- Nickolas Falco

Faculty Advisor / Project Client:

- Khaled Slhoub

Computer Science Project Instructor:

- Philip Chan

Overview:

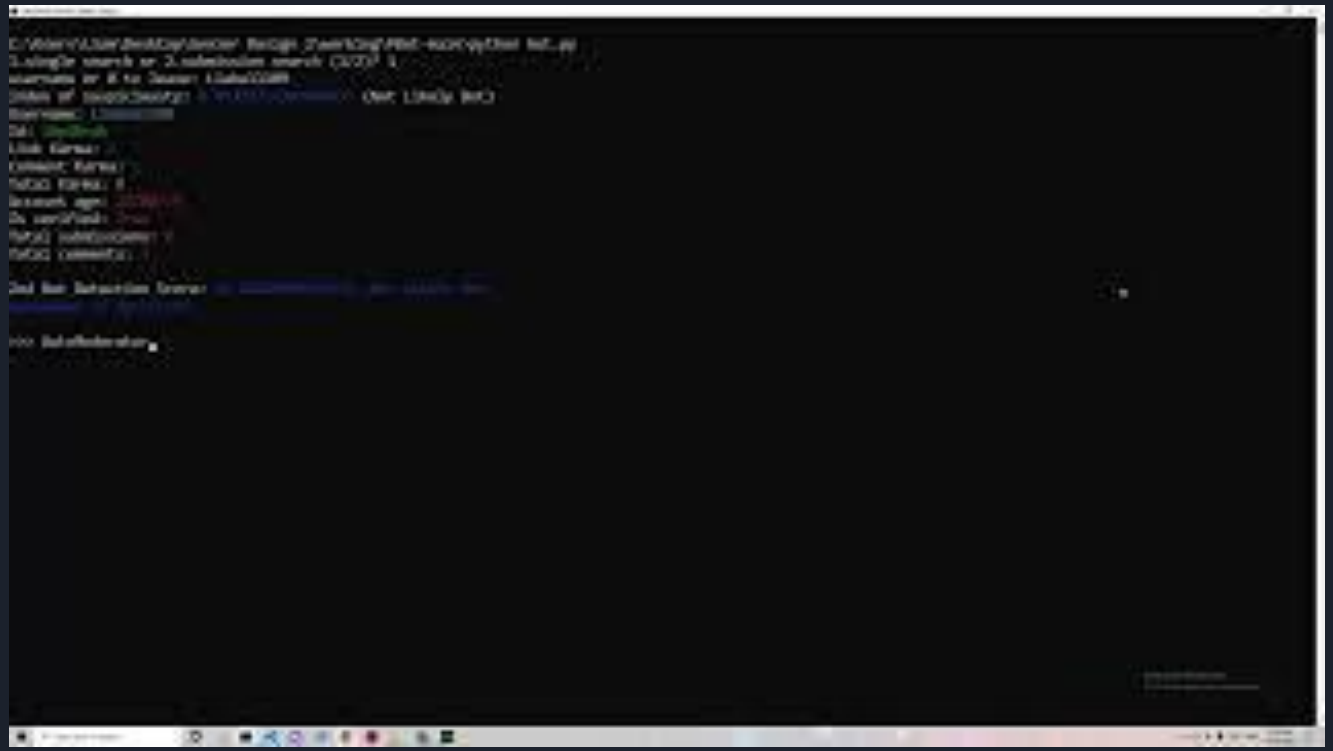
- Discussion of Task Completion:
  - Additional algorithm for bot detection
  - Code Optimizations
  - Database Updates
- Current Milestone Task Matrix
- Advisor Feedback
- Next Milestone Tasks + Matrix

Account Data Bot Detection Algorithm

Bot Detection Based on the following data:

- Check username against known bot list
- Account age (accounts that are active right out the gate)
- Amount of karma the user has
- Whether or not the user has a verified email address
- The length of time between posts
- The difference between the users posts

Demo



https://www.youtube.com/watch?v=uFI63ihNGQ0

Code Optimizations

- Fixed loops that calculated code similarity

```
for c1 in comment_array:
    for c2 in comment_array:
        z *= compare_text(c1, c2)
```

>

```
l = len(comment_array)
for i1 in range(l):
    for i2 in range(i1 + 1, l):
        c1 = comment_array[i1]
        c2 = comment_array[i2]
        z *= compare_text(c1, c2)
```

- Rewriting unnecessary fetch requests

```
totalscore += AnalyseAccount(user)
totalscore += AnalysePosts(user,PostLimit)
totalscore += PostingInterval(user, PostLimit)
totalscore += AnalyseComments(user, PostLimit)
totalscore += CommentInterval(user, PostLimit)
```

Database Updates

- Added functionality to request data from Bot_DB Database
- Adjusted framework to store new data from new detection algorithms

https://youtu.be/5gVQTtgFX2A

Current Milestone Task Matrix

Task	Completion	Cody	Gabriel	Liam	Falco	To Do
Research detection algorithm to work in tandem with the current one, and implement it if possible.	80%	20%	20%	20%	20%	More algorithms are always good, but we need to have more testing methods on our current algorithms
Work on efficiency for the current detection module	60%	10%	40%	5%	5%	Code has been improved slightly, but we wonder if the nature of the project is fairly slow.
Work on the database functionality	90%	20%	10%	60%	0%	Database really just needs a host at this point
Research methods for the deciding module	20%	5%	0%	0%	15%	All of it, we are still debating on how this is going to be done.

Advisor Feedback

- Satisfied with our current progress
- Reminded us that having more methods of detection is always good
- Reminded us framework is able to detect maliciousness (next milestone)

Milestone 5 Plan

- Research and implement as many different detection methods as possible
- Make all of the detection algorithms work together in a cohesive way
- Figure out how we are going to detect maliciousness in the bots we detect
- Create the ebook + poster

Next Milestone Task Matrix

Task	Cody	Gabriel	Liam	Falco
Find and implement more detection algorithms	Research and implementation	Research and implementation	Research and implementation	Research and implementation
Figure out the distinguishing module	Research and implementation	Research and implementation	Research and implementation	Research and implementation
Ebook page and poster	Ebook		Poster	

This concludes our presentation, Thank You