Online Abuse in Local Elections
The SAMbot Municipal Report

Samara Centre for Democracy
The Samara Centre for Democracy is a non-partisan registered charity dedicated to realizing a resilient democracy with an engaged public and responsive institutions. Our research and programs make us a go-to resource for active citizens, educators, public leaders and the media.

Acknowledgment

We thank the team at Areto Labs for their technical expertise, input and collaboration.

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How to cite this report

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Executive Summary

Municipal elections in Canada are the bedrock of our democratic system — vibrant local governments contribute to a healthy political culture by encouraging civic engagement, fostering a sense of community and nurturing the values and practices of democratic governance. Understanding the role that digital abuse is playing in our local democracies is critical for understanding the health of Canadian democracy writ large. To shed light on this, the Samara Centre for Democracy turned to our SAMbot project, a multi-year machine learning initiative that measures abusive content received by Canadian political candidates online.

Using SAMbot, we tracked online abuse in eight municipal elections held in 2022 in the following cities: Vancouver, Surrey, Ottawa, Brampton, Toronto, Winnipeg, Yellowknife and Charlottetown. Across these elections, SAMbot evaluated over 465,000 tweets received by 524 Twitter accounts belonging to city council, school board, and park board candidates along with political party accounts.

We found more than 86,000 abusive tweets with high volumes of online abuse in the Ottawa, Toronto, Vancouver, Winnipeg, Brampton and Surrey elections. Our previous SAMbot reports established that online abuse is a significant problem in federal and provincial elections. These new findings reveal that digital toxicity is affecting our municipal elections as well.

As expected, abusive tweets were common in mayoral races; however, school board trustee candidates also received some of the highest volumes of abusive tweets, many in the form of threats and identity attacks. Identity attacks were, in fact, a significant form of abuse in a number of elections, with attacks concentrated to specific candidates. High levels of identity attacks particularly affected local online conversations in Ottawa and Brampton.
In the Charlottetown and Yellowknife elections we found limited candidate presence on Twitter (and therefore limited abusive content), which suggests that the online political conversation in those locations is taking place on other platforms. This points to the need for more robust research into abuse across different social media platforms.

The volumes of online abuse detected with SAMbot illuminate the challenging working conditions experienced by municipal candidates on the campaign trail. These working conditions, facilitated by digital technologies, threaten to reduce participation and representation in our democracies. Their effects are crucial to understand as we work to build a robust, responsive and inclusive democratic culture in Canada.
Introduction

Throughout the fall of 2022, the Samara Centre for Democracy deployed SAMbot in eight municipal elections across Canada to measure abusive content received by candidates on Twitter. Over 6.5 million people live in these eight municipalities, which is approximately 17% of the Canadian population.

As of 2022, Twitter is the fifth most popular social media platform in Canada with 40% of online Canadian adults possessing a Twitter account. Among these users, demographics tend to skew younger, with higher household incomes and educational outcomes.

The SAMbot project uses AI for civic inquiry in order to better understand technology's influence on our democratic culture. As political discourse is generally at its most toxic during campaigns, SAMbot helps us gain critical insight into the current state of online Canadian political conversations. SAMbot has previously tracked federal and provincial elections. These municipal deployments allow us to measure the types and extent of online abuse in local elections.
The following elections were monitored between August and November 2022 and are presented in chronological order:

- Vancouver
- Surrey
- Ottawa
- Brampton
- Toronto
- Winnipeg
- Yellowknife
- Charlottetown

Across these elections, SAMbot evaluated over 465,000 tweets received by 524 Twitter accounts belonging to city council, school board, and park board candidates along with political party accounts. More than 86,000 abusive tweets were found.

SAMbot uses a machine learning model to assess abusive language. These models are ever-evolving which means that each time SAMbot is deployed, it becomes more accurate and informed. In addition to measuring volume of abuse, SAMbot also provides insight into the type of abuse received by candidates (e.g. identity attacks, sexually explicit content, threats).

This report presents an overview of findings along with election-specific analysis.

**Tracking periods**

SAMbot tracked each of these elections, in their respective regions & time zones, from the evening that the nomination period closed to the evening of election day. This information was drawn from each municipality’s website and/or provincial election offices. Candidates were only tracked by SAMbot if they had a public and active Twitter account by the end of their election’s nomination period.
Toronto, Brampton, and Ottawa elections were tracked for 65 days from: August 20, 2022 at 12:00 a.m. ET to October 24, 2022 at 11:59 p.m. ET.

Vancouver and Surrey elections were tracked for 35 days: from September 10, 2022 at 12:00 a.m. PT to October 15, 2022 at 11:59 p.m. PT.

The Winnipeg election was tracked for 35 days from: September 21, 2022 at 12:00 a.m. CT to October 26, 2022 at 11:59 p.m. CT.

The Charlottetown election was tracked for 17 days from October 22, 2022 at 12:00 a.m. AT to November 7, 2022 at 11:59 p.m. AT.

How SAMbot measures abuse

SAMbot is a machine learning bot. Each message that SAMbot tracks, whether that’s a reply, quote tweet or mention, was analyzed and scored on five abuse categories:

<table>
<thead>
<tr>
<th>Abuse category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>A rude, disrespectful, or unreasonable comment that is likely to make people leave a discussion.</td>
</tr>
<tr>
<td>Insults</td>
<td>Insulting, inflammatory, or negative comment towards a person or a group of people.</td>
</tr>
<tr>
<td>Threats</td>
<td>Describes an intention to inflict pain, injury, or violence against an individual or group.</td>
</tr>
<tr>
<td>Identity attacks</td>
<td>Negative or hateful comments targeting someone because of their identity.</td>
</tr>
<tr>
<td>Sexually explicit</td>
<td>Contains references to sexual acts, body parts, or other lewd content.</td>
</tr>
</tbody>
</table>

Tweets can fall into two or more of these categories simultaneously. For example, a tweet can be both a threat and an identity attack.

If a tweet is scored as any of those five abuse categories, it would also be counted as an abusive tweet. Whether a tweet meets just one, or multiple abuse categories, it is counted as a single abusive tweet.
Vancouver

**Tracked Accounts**

- 99
  - 6 Mayor
  - 44 Councillor
  - 20 Park Board Commissioner
  - 19 School Trustee
  - 10 Political Party

**Tracking Period**

- 35 Days
  - September 10, 2022, 12:00 a.m. PT - October 15, 2022, 11:59 PT

**Total Tweets**

- 77,911

**Abusive Tweets**

- 9,873
  - Toxic: 3,081
  - Insults: 5,917
  - Threats: 3,686
  - Identity Attacks: 1,950
  - Sexually Explicit: 1,087

**Percentage Abusive**

- 13%
Vancouver Mayoral Candidates Received the Most Abuse

- Incumbent mayoral candidate **Kennedy Stewart** received over 20% of all abusive tweets (2,031). Stewart placed second in the mayoral race.
- **Colleen Hardwick** placed third in the mayoral election and received the second highest volume of abusive tweets (599).
- **Ken Sim** was elected mayor of Vancouver and received the third highest volume of abusive tweets (562).

### Top 10 Vancouver Candidates: Highest Volume of Tweets

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Non-Abusive Tweets</th>
<th>Abusive Tweets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kennedy Stewart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleen Hardwick</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ken Sim</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bill Tieleman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sean Orr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christine Boyle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peter Meiszner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sean Nardi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mark Marissen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Param Nijjar</td>
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</tr>
</tbody>
</table>

*Candidates are ranked based on the volume of total tweets they received.*
Forward Together Vancouver Candidates Received Most Abusive Tweets

- Vancouver is one of the few municipalities in Canada where most candidates are part of local political parties.¹

- **Forward Together Vancouver** candidates faced the highest volume of abusive tweets (2,419), 84% of which were directed at Kennedy Stewart. Zero Forward Together Vancouver candidates were elected in 2022.

- **TEAM** candidates received the highest volume of tweets (22,104) and the second highest volume of abusive tweets (2,050). Zero TEAM candidates were elected in 2022.

- **ABC Vancouver candidates** received the third highest volume of abusive tweets (1,566). Nineteen ABC Vancouver candidates were elected in 2022, achieving a majority on city council, the park board, and the school board as well as the mayor’s chair.

Vancouver Political Party Tweet Breakdown

Data includes total tweets received by candidates and official party accounts.
Tracked Accounts

54
- 6 Mayor
- 32 Councillor
- 10 School Trustee
- 6 Political Party

Tracking Period

35 Days
September 10, 2022, 12:00 a.m. PT - October 15, 2022, 11:59 PT

Total Tweets

7,626

Abusive Tweets

980

Percentage Abusive

13%

Toxic

273

Insults

645

Threats

296

Identity Attacks

175

Sexually Explicit

75
Surrey Mayoral Candidates Received the Most Abuse

Former MP and current British Columbia MLA Jinny Sims of the Surrey Forward party placed fourth in the mayoral election while receiving the highest volumes of total tweets (1,381) and abusive tweets (199).

Brenda Locke of the Surrey Connect party was elected mayor of Surrey in 2022 and received the second most abusive tweets (169) of any candidate in the election.

Incumbent mayoral candidate Doug McCallum of the Safe Surrey Coalition wasn’t tracked by SAMbot, as he did not have a Twitter account. He placed second in the mayoral race, losing by less than 1%.

Top 10 Surrey Candidates: Highest Volume of Tweets

Candidates are ranked based on the volume of total tweets they received.
Surrey Forward Candidates Received the Most Abusive Tweets

Surrey is one of the few municipalities in Canada where most candidates are part of local political parties.\(^4\)

Surrey Forward candidates received the highest volume of abusive tweets (395). Zero Surrey Forward candidates were elected in 2022.

Surrey Connect candidates received the second highest volume of abusive tweets (358). Four council Surrey Connect candidates and their mayoral candidate were elected in 2022.

Even though they received over 470 tweets, **Surrey First Education** candidates collectively received only one abusive tweet during the entire election period. All six Surrey First Education candidates were elected, five of which were monitored by SAMbot.

Surrey Political Party Tweet Breakdown

Data includes total tweets received by candidates and official party accounts.
Ottawa

Tracked Accounts
112
- 12 Mayor
- 63 Councillor
- 37 School Trustee

Tracking Period
65 Days
August 20, 2022, 12:00 a.m. ET - October 24, 2022, 11:59 ET

Total Tweets
257,214
Abusive Tweets
54,002
Percentage Abusive
21%

Toxic
21,792
Insults
36,898
Threats
16,012
Identity Attacks
11,180
Sexually Explicit
6,518
Ottawa Mayoral and School Trustee Candidates Received the Most Engagement and Abuse

**Catherine McKenney** was an Ottawa city councillor representing Somerset Ward from 2014 to 2022 and they placed second in the mayoral race. McKenney received the most tweets (85,697) and the second most abusive tweets (17,036) of any candidate.

**Mark Sutcliffe** was elected mayor of Ottawa in 2022. He received the fourth highest volume of abusive tweets (4,170).

School trustee candidate **Nili Kaplan-Myrth** received the most abusive tweets (21,460) of any candidate. Kaplan-Myrth is a family physician who was targeted due to her advocacy in support of pandemic safety measures and COVID-19 vaccination. She was elected in 2022.

**Top 10 Ottawa Candidates: Highest Volume of Tweets**

<table>
<thead>
<tr>
<th>Candidates</th>
<th>Total Tweets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catherine McKenney</td>
<td>85,697</td>
</tr>
<tr>
<td>Nili Kaplan-Myrth</td>
<td>21,460</td>
</tr>
<tr>
<td>Mark Sutcliffe</td>
<td>17,036</td>
</tr>
<tr>
<td>Chanel Pfahl</td>
<td>11,280</td>
</tr>
<tr>
<td>Ariel Troster</td>
<td>6,980</td>
</tr>
<tr>
<td>Jeff Leiper</td>
<td>5,420</td>
</tr>
<tr>
<td>Rebecca Bromwich</td>
<td>2,965</td>
</tr>
<tr>
<td>Miranda Gray</td>
<td>2,405</td>
</tr>
<tr>
<td>Bob Chiarelli</td>
<td>2,172</td>
</tr>
<tr>
<td>Shannon Boscy</td>
<td>1,350</td>
</tr>
</tbody>
</table>

Candidates are ranked based on the volume of total tweets they received.
One in Ten Tweets Received by Kaplan-Myrth Were Threats

Below is a selection of real tweets that were received by Kaplan-Myrth that SAMbot evaluated as threats. They are shared to illuminate the severity of abuse candidates can experience on the digital campaign trail. Only accounts tracked by SAMbot are presented.

Warning: The following tweets include language that is graphic, offensive and potentially traumatizing. We are sharing this content in order to responsibly and accurately convey the full working conditions that municipal candidates confront on the digital campaign trail.

All twitter handles aside from the candidates are represented as @USER for anonymity.

@nilikm You should all be hanged for pushing this on kids. Shame.

@nilikm You are a menace to our society and need to be removed

@USER .@USER .@nilikm Masks are deadly and useless. If you were not all liars that would be one thing but you have all aided and abetted in genocide, your crocodile tears mean fuck all. Instead you need to be thrown in prison and Nuremberged.
The Highest Rates of Abusive Content Were Associated with Ottawa School Board Trustee Candidates

Five of the six candidates to receive the highest proportions of abusive tweets were running to be Ottawa Carleton District School Board trustees.

The highest proportions of abusive tweets went to school trustee candidates Shannon Boschy and Chanel Pfahl. Respectively, 33% and 32% of the tweets they received were abusive. Both candidates vocally objected to equity, inclusion and sex education policies. They were outspoken about their opposition to access to gender-affirming care for youth. Neither was elected in 2022.

Ottawa Candidates: Proportion of Abusive Tweets Breakdown

The candidates received over 100 tweets and are ranked based on their proportion of abusive content.
Identity Attacks Common in Ottawa School Trustee Twitter Discussion

SAMbot evaluated a high proportion of the abusive tweets received by Ottawa school trustee candidates Chanel Pfahl and Shannon Boschy as identity attacks. Respectively, 16% (2,559 tweets) and 15% (339 tweets) of all tweets they received were categorized in this way.

SAMbot assesses a tweet as an identity attack whether the attack is directed at the candidate or at another individual or group. In this case, a significant portion of the identity attacks received by these candidates were not targeting their demographic characteristics, but instead, their opposition to teaching gender inclusivity and anti-racism in schools. Tweets that described these candidates as transphobic, racist, or similar terms were evaluated as identity attacks by SAMbot. At the same time, many tweets SAMbot labeled as identity attacks were sent in support of these candidates and their policies. For example, when a candidate was tagged in a tweet containing abusive language towards trans people, SAMbot registered that tweet as an identity attack towards that same candidate.

The category of identity attacks, therefore, is a complex one, and doesn’t necessarily imply that a candidates’ specific identity was attacked. Instead it indicates that conversations about identities — their expression and related policies — are manifesting a significant volume of abuse, which is in turn shaping the substance, tone and experience of political conversations online.
Below is a sample of real tweets that were received by Pfahl and Boschy that SAMbot evaluated as identity attacks. They are shared to illuminate the severity of abuse candidates can experience on the digital campaign trail. Only accounts tracked by SAMbot are presented.

**Warning:** The following tweets include language that is graphic, offensive and potentially traumatizing. We are sharing this content in order to responsibly and accurately convey the full working conditions that municipal candidates confront on the digital campaign trail.

All twitter handles aside from the candidates are represented as @USER for anonymity.
Normally, straight teachers don’t feel the need to validate their sexual orientation with their students and if they do, there is a name for that: Groomer or pedophile. But somehow, trans and non binary activists doing the same thing always get away with a free pass.

Holy fuck what a racist bitch you are

Nope. YOU are completely projecting. Shannon cares about what is in kids’ MINDS, not their pants. Parents are sick of the pseudoscientific religious gender ideology that is ravaging gay kids, autistic kids, traumatized kids, anxious kids. ENOUGH.
Brampton

**Tracked Accounts**

39
- 3 Mayor
- 23 Councillor
- 13 School Trustee

**Tracking Period**

65 Days
August 20, 2022, 12:00 a.m. ET - October 24, 2022, 11:59 ET

**Total Tweets**

9,502

**Abusive Tweets**

2,550

**Percentage Abusive**

27%

**Toxic**

664

**Insults**

1,105

**Threats**

441

**Identity Attacks**

929

**Sexually Explicit**

242
Incumbent Mayor and First-Time Council Candidate Received the Most Identity Attacks

Nearly 10% of all monitored tweets were categorized as identity attacks in the Brampton election.

Over 80% of these identity attacks were directed at just two candidates, incumbent mayoral candidate Patrick Brown and city councilor candidate Jaskaran Sandhu.

Brampton Candidates: Identity Attacks

It’s important to note that identity attacks identified by SAMbot aren’t necessarily directed at the candidate who receives the tweet — it could be towards other candidates or groups of constituents. In this case, many of the identity attacks received by Brown were directed at Brampton’s South Asian communities — historically, Brown has vocally supported many of the South Asian minority groups that make up Brampton’s population. Many of the identity attacks directed at Sandhu are related to his support for Sikh self-determination in India.
The category of identity attacks is complex because it captures abusive sentiment directed at groups and communities as well as abuse directed at a specific candidate. A function of this category is to shed light on the extent to which abusive rhetoric towards different Canadian identities is showing up in online political conversations.

Below is a selection of real tweets that were received by Brown and Sandhu that SAMbot evaluated as identity attacks. They are shared to illuminate the severity of abuse candidates can experience on the digital campaign trail. Only accounts tracked by SAMbot are presented.

**Warning:** The following tweets include language that is graphic, offensive and potentially traumatizing. We are sharing this content in order to responsibly and accurately convey the full working conditions that municipal candidates confront on the digital campaign trail.

All twitter handles aside from the candidates are represented as @USER for anonymity.

@patrickbrowntnt Dirty Indian politics coming to Canada, I doubt anyone else did this but themselves. Trying to tranish others image.

@JaskaranSandhu_ Canadian People must see what you really are - F#king Terrorist sympathiser, keep your mouth where sun doesn’t shine
Sixty Percent of Tweets Received by First-Time Brampton City Council Candidate Were Abusive

Three out of every five (60%) tweets received by council candidate Jaskaran Sandhu were abusive. He received 853 abusive tweets.

Sandhu is a co-founder of Baaz News, which reports on issues relevant to Canada’s Sikh and Punjabi diaspora. He is an advocate for the self-determination of Sikhs in India and a vocal critic of India’s prime minister Narendra Modi’s growing authoritarianism.\(^9\)

Brampton Candidates: Proportion of Abusive Tweets Breakdown

The candidates received over 100 tweets and are ranked based on their proportion of abusive content.
Incumbent Brampton Mayor Received the Most Abusive Tweets

Mayor **Patrick Brown** was re-elected in 2022. He received the highest volume of total tweets (**4,981**) and abusive tweets (**1,248**).

Second place mayoral candidate **Nikki Kaur** was not monitored by SAMbot because she did not have a public Twitter account prior to the end of the candidate nomination period.

**Top 10 Brampton Candidates: Highest Volume of Tweets**

*Candidates are ranked based on the volume of total tweets they received.*
Tracked Accounts

131
- 15 Mayor
- 74 Councillor
- 42 School Trustee

Tracking Period

65 Days
August 20, 2022, 12:00 a.m. ET - October 24, 2022, 11:59 ET

Total Tweets
91,078
Abusive Tweets
16,120
Percentage Abusive
18%

Toxic
6,253
Insults
10,372
Threats
6,864
Identity Attacks
3,295
Sexually Explicit
2,348
Incumbent Toronto Mayor Garnered the Most Abuse

John Tory won his bid for re-election in 2022, and was mayor of Toronto from 2014 until his resignation in 2023. Tory received by far the highest volumes of total tweets (31,717) and abusive tweets (8,648).

Gil Penalosa was the second place mayoral candidate and received the second highest volume of abusive tweets (1,076).

Top 10 Toronto Candidates: Highest Volume of Tweets

Candidates are ranked based on the volume of total tweets they received.
Tory Alone Received Over Half of All Abusive Tweets

John Tory received 54% of all abusive tweets tracked among Toronto candidates. Over one in four tweets received by Tory were abusive.

Toronto Candidates: Abusive Tweets

8,648

John Tory

6,396

1,076

Gil Penalosa

122 other Toronto candidates

=100
**Tracked Accounts**

71

- 11 Mayor
- 32 Councillor
- 28 School Trustee

**Tracking Period**

35 Days

September 21, 2022, 12:00 a.m. CT - October 26, 2022, 11:59 CT

**Total Tweets**

20,832

**Abusive Tweets**

3,046

**Percentage Abusive**

15%

**Toxic**

1,187

**Insults**

1,944

**Threats**

957

**Identity Attacks**

743

**Sexually Explicit**

406
Winnipeg Mayor-Elect Faced Low Rates of Abuse

Scott Gillingham was elected mayor of Winnipeg in 2022. Candidates who are successful in securing leadership positions typically receive some of the highest volumes and proportions of abuse. Gillingham only received the eighth highest volume of abusive tweets (119).

Glen Murray, who was a close second in the mayoral race (losing by a margin of 3%), received the second highest volume of abusive tweets (432).

Sixth place mayoral candidate Jenny Motkaluk received the highest volume of abusive tweets (1,076), largely in response to controversial comments she made about the changes to Winnipeg’s Canada Day celebrations, enacted to further reconciliation with Indigenous communities.11

Top 10 Winnipeg Candidates: Highest Volume of Tweets

Candidates are ranked based on the volume of total tweets they received.
<table>
<thead>
<tr>
<th>Tracked Accounts</th>
<th>Total Tweets</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
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<td></td>
<td>N/A</td>
<td>N/A</td>
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</tbody>
</table>
No Data was Available for Yellowknife

None of the candidates in the Yellowknife election had active and public Twitter accounts as of the end of the election’s nomination period. As a result, SAMbot was unable to track any candidates in Yellowknife. This may be because local residents are having online political conversations on other platforms.

Across geographical regions, it’s important to recognize that certain demographics are over or underrepresented in online discussions depending on the platform. Although online platforms present as comprehensive “digital town squares,” these discussion forums are not representative of all Canadians, and conversations can be siloed within each platform. We need further research to better understand where and how online civic discussions are taking place for all Canadians, particularly in rural or lower-population communities.
Charlottetown

Tracked Accounts
18
- 3 Mayor
- 15 Councillor

Tracking Period
17 Days
October 22, 2022, 12:00 a.m. AT - November 7, 2022, 11:59 AT

Total Tweets
20,832
Abusive Tweets
3,046
Percentage Abusive
15%

Toxic
1,187
Insults
1,944
Threats
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Identity Attacks
743
Sexually Explicit
406
Few Charlottetown Candidates had Twitter Accounts

Compared to other elections tracked by SAMbot, few Charlottetown candidates had a Twitter account and the cases that one existed there was limited activity. Subsequently, there was little to no abusive content on Twitter during the Charlottetown election. This may be because local residents were having online political conversations on other platforms.

Different platforms capture distinct demographics, and although Twitter has been described by some as a “digital town square,” it is not the preferred platform for all Canadians. Certain populations are over-represented; for example, Twitter users are younger and more likely to hold post-secondary and advanced degrees than the broader population. There is limited research about differential platform usage across Canadian populations, particularly in rural communities, towns and smaller cities. It is critical to address this gap in data in order to fully understand how Canadians are using social media for civic engagement.

Mayor Philip Brown was re-elected in 2022 and received 118 tweets during the election period, eight of which were abusive.

Among the candidates who were on Twitter, 11 of 18 didn’t receive any abusive tweets.

Unlike in British Columbia, Manitoba, and Ontario municipal elections, Prince Edward Island School Trustee elections were held separately from city council elections. Therefore, Charlottetown school trustee candidates were not tracked by SAMbot.
Methodology

Throughout the fall of 2022, the Samara Centre for Democracy deployed SAMbot in eight municipal elections across Canada to measure abusive content received by candidates and political parties on Twitter.

SAMbot tracked each of these elections, in their respective regions & time zones, from the evening that nominations closed until the evening of election day.

- The Toronto, Brampton, and Ottawa elections were tracked for 65 days from August 20, 2022 at 12:00 a.m. ET to October 24, 2022 at 11:59 p.m. ET. Candidates for city council and relevant school boards were monitored in these elections.

- The Vancouver and Surrey elections were tracked for 35 days from September 10, 2022 at 12:00 a.m. PT to October 15, 2022 at 11:59 p.m. PT. Candidates for city council and relevant school boards were monitored as well as official political party Twitter accounts in both elections. The Vancouver election included monitoring of park board candidates.

- The Winnipeg election was tracked for 35 days from September 21, 2022 at 12:00 a.m. CT to October 26, 2022 at 11:59 p.m. CT. Candidates for city council and relevant school boards were monitored in this election.

- The Charlottetown election was tracked for 17 days from October 22, 2022 at 12:00 a.m. AT to November 7, 2022 at 11:59 p.m. AT. Candidates for city council were monitored in this election. Unlike in other elections, school board trustee candidates were not monitored, as Prince Edward Island school board trustee elections are held separately and at different times than city council elections.

- No Yellowknife candidates had public and active Twitter accounts by the end of the election’s nomination period. As a result no candidates were tracked.
SAMbot tracks the Twitter mentions of all candidates who possessed a public and active Twitter account as of the end of each election’s respective nomination deadlines.

Since data from each election was collected during different time periods, different lengths, and with different totals of tracked candidates, it is not useful, nor advised, to compare municipal SAMbot data across elections.

SAMbot does not track or store retweets, as counting the same tweet more than once can distort the analysis. SAMbot only evaluates text within a tweet; content such as images, audio, or videos that may spread abuse cannot be evaluated by SAMbot. Twitter data was collected and used in line with Twitter’s acceptable terms of use.

How does SAMbot detect toxicity?

SAMbot is a machine learning bot — a software application that runs automated tasks. SAMbot tracks all English and French tweets sent to candidates. Each message that SAMbot tracked, whether it’s a reply, quote tweet or mention, was analyzed and sorted based on five abuse categories:

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<tr>
<td>Threats</td>
<td>Describes an intention to inflict pain, injury, or violence against an individual or group.</td>
</tr>
<tr>
<td>Identity attacks</td>
<td>Negative or hateful comments targeting someone because of their identity.</td>
</tr>
<tr>
<td>Sexually explicit</td>
<td>Contains references to sexual acts, body parts, or other lewd content.</td>
</tr>
</tbody>
</table>

Abuse categories are not exclusive. Tweets can possess more than one attribute (for example, a tweet could contain a threat and an identity attack simultaneously).
SAMbot makes a confidence prediction to assess whether a tweet meets an abuse category. When a tweet is evaluated, SAMbot gives the tweet a score from 0% to 100% for each category, based on how certain SAMbot is that the tweet meets that abuse category. If SAMbot assesses a tweet as >=51% likely to meet an abuse category, we determine that the tweet has met the criteria.

If a tweet is scored as >=51% in any of those five abuse categories, it would also be categorized as an abusive tweet. The abusive tweet category serves to aggregate all comments that meet at least one abuse category.

Using machine learning allows us to analyze tweets at a massive scale. SAMbot can evaluate millions of tweets for how likely abusive or toxic they are. However, we willingly sacrifice a degree of precision in the pursuit of scale through our use of machine learning. There is no explicit qualitative analysis conducted by human researchers to evaluate these tweets before they are collected; SAMbot, as a piece of software, conducts all of this sentiment analysis. Thus, SAMbot-related findings are not intended to act as precise findings, but instead to help point us in the direction of where and how online abuse manifests in Canadian political discussions.

**How SAMbot is always improving**

SAMbot uses a machine learning model to assess abusive language. These models are ever-evolving which means that each time SAMbot is deployed, it becomes more accurate and informed. In addition to measuring volume of abuse, SAMbot also provides insight into the type of abuse received by candidates (e.g. identity attacks, sexually explicit content, threats).

However, this also means that data collected during different SAMbot election periods must be siloed. Data collected in different periods (say for example, our 2021 federal election data versus our 2022 municipal election data) can not, and should not be compared because the methodology behind how SAMbot evaluates language has changed significantly between periods, thus, the data is incompatible, and will likely be skewed in certain capacities.
## Appendix

### Vancouver: Top 10 Accounts with the Most Abusive Tweets

You can explore all of our Vancouver data at [https://www.samaracentre.ca/articles/sambot-vancouver-election](https://www.samaracentre.ca/articles/sambot-vancouver-election)

<table>
<thead>
<tr>
<th>Account</th>
<th>Account Type</th>
<th>Political Party</th>
<th>Total Tweets</th>
<th>Abusive</th>
<th>Percent. Abusive (%)</th>
<th>Toxic</th>
<th>Insults</th>
<th>Threats</th>
<th>Identity Attacks</th>
<th>Sexually Explicit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kennedy Stewart</td>
<td>Mayor</td>
<td>Forward Together Vancouver</td>
<td>9,282</td>
<td>2,031</td>
<td>22%</td>
<td>827</td>
<td>1,474</td>
<td>652</td>
<td>316</td>
<td>178</td>
</tr>
<tr>
<td>One City Vancouver</td>
<td>Party</td>
<td>One City Vancouver</td>
<td>5,445</td>
<td>638</td>
<td>12%</td>
<td>183</td>
<td>376</td>
<td>237</td>
<td>115</td>
<td>76</td>
</tr>
<tr>
<td>Colleen Hardwick</td>
<td>Mayor</td>
<td>TEAM</td>
<td>5,594</td>
<td>599</td>
<td>11%</td>
<td>166</td>
<td>381</td>
<td>174</td>
<td>132</td>
<td>65</td>
</tr>
<tr>
<td>Ken Sim</td>
<td>Mayor</td>
<td>ABC Vancouver</td>
<td>4,268</td>
<td>562</td>
<td>13%</td>
<td>164</td>
<td>322</td>
<td>226</td>
<td>102</td>
<td>65</td>
</tr>
<tr>
<td>TEAM</td>
<td>Party</td>
<td>TEAM</td>
<td>6,041</td>
<td>528</td>
<td>9%</td>
<td>126</td>
<td>315</td>
<td>187</td>
<td>70</td>
<td>58</td>
</tr>
<tr>
<td>Sean Orr</td>
<td>Councillor</td>
<td>Vote Socialist</td>
<td>2,993</td>
<td>444</td>
<td>15%</td>
<td>143</td>
<td>244</td>
<td>197</td>
<td>101</td>
<td>67</td>
</tr>
<tr>
<td>ABC Vancouver</td>
<td>Party</td>
<td>ABC Vancouver</td>
<td>3,867</td>
<td>440</td>
<td>11%</td>
<td>109</td>
<td>218</td>
<td>204</td>
<td>96</td>
<td>54</td>
</tr>
<tr>
<td>Bill Tieleman</td>
<td>Councillor</td>
<td>TEAM</td>
<td>3,969</td>
<td>406</td>
<td>10%</td>
<td>123</td>
<td>251</td>
<td>148</td>
<td>61</td>
<td>37</td>
</tr>
<tr>
<td>Christine Boyle</td>
<td>Councillor</td>
<td>One City Vancouver</td>
<td>2,039</td>
<td>268</td>
<td>13%</td>
<td>90</td>
<td>167</td>
<td>82</td>
<td>47</td>
<td>29</td>
</tr>
<tr>
<td>Breen Ouellette</td>
<td>Councillor</td>
<td>COPE</td>
<td>916</td>
<td>259</td>
<td>28%</td>
<td>87</td>
<td>142</td>
<td>74</td>
<td>159</td>
<td>27</td>
</tr>
<tr>
<td>RollerGirl</td>
<td>Park Board Commissioner</td>
<td>Independent</td>
<td>1</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Surrey: Top 10 Accounts with the Most Abusive Tweets

You can explore all of our Surrey data at https://www.samaracentre.ca/articles/sambot-surrey-election

<table>
<thead>
<tr>
<th>Account</th>
<th>Account Type</th>
<th>Political Party</th>
<th>Total Tweets</th>
<th>Abusive</th>
<th>Percent. Abusive (%)</th>
<th>Toxic</th>
<th>Insults</th>
<th>Threats</th>
<th>Identity Attacks</th>
<th>Sexually Explicit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jinny Sims</td>
<td>Mayor</td>
<td>Surrey Forward</td>
<td>1,381</td>
<td>199</td>
<td>14%</td>
<td>58</td>
<td>137</td>
<td>61</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>Surrey Forward</td>
<td>Party Account</td>
<td>Surrey Forward</td>
<td>1,189</td>
<td>165</td>
<td>14%</td>
<td>47</td>
<td>111</td>
<td>50</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>Brenda Locke</td>
<td>Mayor</td>
<td>Surrey Connect</td>
<td>1,171</td>
<td>169</td>
<td>14%</td>
<td>62</td>
<td>122</td>
<td>49</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>Surrey Connect</td>
<td>Party Account</td>
<td>Surrey Connect</td>
<td>486</td>
<td>71</td>
<td>15%</td>
<td>22</td>
<td>53</td>
<td>18</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Ramona Kaptyn</td>
<td>Councillor</td>
<td>Surrey Connect</td>
<td>408</td>
<td>69</td>
<td>17%</td>
<td>12</td>
<td>46</td>
<td>23</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>United Surrey</td>
<td>Party Account</td>
<td>United Surrey</td>
<td>378</td>
<td>20</td>
<td>5%</td>
<td>5</td>
<td>12</td>
<td>9</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Linda Annis</td>
<td>Councillor</td>
<td>Surrey First</td>
<td>283</td>
<td>66</td>
<td>23%</td>
<td>14</td>
<td>41</td>
<td>13</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>Sukh Dhaliwal</td>
<td>Mayor</td>
<td>United Surrey</td>
<td>283</td>
<td>21</td>
<td>7%</td>
<td>3</td>
<td>13</td>
<td>10</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Sebastian Sajda</td>
<td>Councillor</td>
<td>Surrey Connect</td>
<td>279</td>
<td>33</td>
<td>12%</td>
<td>11</td>
<td>20</td>
<td>15</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Jasbir Sandhu</td>
<td>Councillor</td>
<td>United Surrey</td>
<td>201</td>
<td>12</td>
<td>6%</td>
<td>0</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>
## Ottawa: Top 10 Accounts with the Most Abusive Tweets

You can explore all of our Ottawa data at [https://www.samaracentre.ca/articles/sambot-ottawa-election](https://www.samaracentre.ca/articles/sambot-ottawa-election)

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Candidate Type</th>
<th>Ward</th>
<th>Total Tweets</th>
<th>Abusive</th>
<th>Percent. Abusive (%)</th>
<th>Toxic</th>
<th>Insults</th>
<th>Threats</th>
<th>Identity Attacks</th>
<th>Sexually Explicit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nili Kaplan-Myrth</td>
<td>School Trustee</td>
<td>Ottawa-Carleton District School Board - Zone 9</td>
<td>74,823</td>
<td>21,460</td>
<td>29%</td>
<td>9,291</td>
<td>15,002</td>
<td>7,530</td>
<td>3,399</td>
<td>2,073</td>
</tr>
<tr>
<td>Catherine McKenney</td>
<td>Mayor</td>
<td>N/A</td>
<td>85,697</td>
<td>17,036</td>
<td>20%</td>
<td>7,655</td>
<td>12,878</td>
<td>4,025</td>
<td>2,991</td>
<td>2,018</td>
</tr>
<tr>
<td>Chanel Pfahl</td>
<td>School Trustee</td>
<td>Ottawa-Carleton District School Board - Zone 8</td>
<td>15,938</td>
<td>5,073</td>
<td>32%</td>
<td>1,465</td>
<td>2,663</td>
<td>1,086</td>
<td>2,559</td>
<td>973</td>
</tr>
<tr>
<td>Mark Sutcliffe</td>
<td>Mayor</td>
<td>N/A</td>
<td>30,831</td>
<td>4,170</td>
<td>14%</td>
<td>1,438</td>
<td>2,850</td>
<td>1,101</td>
<td>684</td>
<td>518</td>
</tr>
<tr>
<td>Ariel Troster</td>
<td>Councillor</td>
<td>Ward 14 Somerset</td>
<td>6,982</td>
<td>812</td>
<td>12%</td>
<td>246</td>
<td>422</td>
<td>340</td>
<td>172</td>
<td>113</td>
</tr>
<tr>
<td>Shannon Boschy</td>
<td>School Trustee</td>
<td>Ottawa-Carleton District School Board - Zone 6</td>
<td>2,221</td>
<td>743</td>
<td>33%</td>
<td>269</td>
<td>427</td>
<td>182</td>
<td>339</td>
<td>182</td>
</tr>
<tr>
<td>Rebecca Bromwich</td>
<td>Councillor</td>
<td>Ward 17 Capital</td>
<td>3,175</td>
<td>564</td>
<td>18%</td>
<td>158</td>
<td>372</td>
<td>195</td>
<td>109</td>
<td>58</td>
</tr>
<tr>
<td>Jeff Leiper</td>
<td>Councillor</td>
<td>Ward 15 Kitchissippi</td>
<td>3,461</td>
<td>398</td>
<td>11%</td>
<td>131</td>
<td>218</td>
<td>170</td>
<td>58</td>
<td>47</td>
</tr>
<tr>
<td>Bob Chiarelli</td>
<td>Mayor</td>
<td>N/A</td>
<td>2,515</td>
<td>291</td>
<td>12%</td>
<td>79</td>
<td>183</td>
<td>91</td>
<td>35</td>
<td>56</td>
</tr>
<tr>
<td>Miranda Gray</td>
<td>Councillor</td>
<td>Ward 11 Beacon Hill-Cyrville</td>
<td>2,826</td>
<td>223</td>
<td>8%</td>
<td>62</td>
<td>109</td>
<td>93</td>
<td>32</td>
<td>32</td>
</tr>
</tbody>
</table>
Brampton: Top 10 Accounts with the Most Abusive Tweets

You can explore all of our Brampton data at https://www.samaracentre.ca/articles/sambot-brampton-election

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Candidate Type</th>
<th>Ward</th>
<th>Total Tweets</th>
<th>Abusive</th>
<th>Percent. Abusive (%)</th>
<th>Toxic</th>
<th>Insults</th>
<th>Threats</th>
<th>Identity Attacks</th>
<th>Sexually Explicit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patrick Brown</td>
<td>Mayor</td>
<td>N/A</td>
<td>4,981</td>
<td>1,248</td>
<td>25%</td>
<td>406</td>
<td>667</td>
<td>278</td>
<td>522</td>
<td>144</td>
</tr>
<tr>
<td>Jaskaran Sandhu</td>
<td>Councillor</td>
<td>Councillor, City - Wards 7, 8</td>
<td>1,423</td>
<td>853</td>
<td>60%</td>
<td>146</td>
<td>224</td>
<td>76</td>
<td>253</td>
<td>17</td>
</tr>
<tr>
<td>Rowena Santos</td>
<td>Councillor</td>
<td>Councillor, City - Wards 1, 5</td>
<td>393</td>
<td>51</td>
<td>13%</td>
<td>17</td>
<td>28</td>
<td>12</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Gurpreet Singh Dhillon</td>
<td>Councillor</td>
<td>Councillor, Regional - Wards 9, 10</td>
<td>181</td>
<td>51</td>
<td>28%</td>
<td>14</td>
<td>31</td>
<td>11</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Michael Dancy</td>
<td>Councillor</td>
<td>Councillor, Regional - Wards 7, 8</td>
<td>529</td>
<td>48</td>
<td>9%</td>
<td>12</td>
<td>20</td>
<td>13</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Paul Vicente</td>
<td>Councillor</td>
<td>Councillor, Regional - Wards 1, 5</td>
<td>274</td>
<td>45</td>
<td>16%</td>
<td>19</td>
<td>29</td>
<td>14</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Azad Singh Goyat</td>
<td>Councillor</td>
<td>Councillor, Regional - Wards 9, 10</td>
<td>175</td>
<td>38</td>
<td>22%</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>36</td>
<td>0</td>
</tr>
<tr>
<td>Gurpartap Singh Toor</td>
<td>Councillor</td>
<td>Councillor, Regional - Wards 9, 10</td>
<td>217</td>
<td>35</td>
<td>16%</td>
<td>7</td>
<td>15</td>
<td>3</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Jeff Bowman</td>
<td>Councillor</td>
<td>Councillor, City - Wards 3, 4</td>
<td>152</td>
<td>35</td>
<td>23%</td>
<td>9</td>
<td>19</td>
<td>5</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Harkirat Singh</td>
<td>Councillor</td>
<td>Councillor, City - Wards 9, 10</td>
<td>176</td>
<td>23</td>
<td>13%</td>
<td>6</td>
<td>12</td>
<td>5</td>
<td>11</td>
<td>1</td>
</tr>
</tbody>
</table>
Toronto: Top 10 Accounts with the Most Abusive Tweets

Some candidates, such as John Tory, Josh Matlow and Brad Bradford, had multiple active Twitter accounts during the election period. Their respective accounts in question are denoted.

You can explore all of our Toronto data at https://www.samaracentre.ca/articles/sambot-toronto-election

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Candidate Type</th>
<th>Ward</th>
<th>Total Tweets</th>
<th>Abusive</th>
<th>Percent. Abusive (%)</th>
<th>Toxic</th>
<th>Insults</th>
<th>Threats</th>
<th>Identity Attacks</th>
<th>Sexually Explicit</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Tory (@JohnTory)</td>
<td>Mayor</td>
<td>N/A</td>
<td>26,291</td>
<td>7,002</td>
<td>27%</td>
<td>3,207</td>
<td>4,916</td>
<td>3,243</td>
<td>1,597</td>
<td>1,393</td>
</tr>
<tr>
<td>John Tory (@TorontoMayor)</td>
<td>Mayor</td>
<td>N/A</td>
<td>5,426</td>
<td>1,646</td>
<td>30%</td>
<td>637</td>
<td>988</td>
<td>836</td>
<td>283</td>
<td>176</td>
</tr>
<tr>
<td>Gil Penalosa</td>
<td>Mayor</td>
<td>N/A</td>
<td>10,138</td>
<td>1,076</td>
<td>11%</td>
<td>375</td>
<td>684</td>
<td>397</td>
<td>122</td>
<td>83</td>
</tr>
<tr>
<td>Blake Acton</td>
<td>Mayor</td>
<td>N/A</td>
<td>3,811</td>
<td>835</td>
<td>22%</td>
<td>321</td>
<td>570</td>
<td>261</td>
<td>195</td>
<td>85</td>
</tr>
<tr>
<td>Adam Golding</td>
<td>Councillor</td>
<td>Councillor Ward 11 - University-Rosedale</td>
<td>2,672</td>
<td>353</td>
<td>13%</td>
<td>107</td>
<td>196</td>
<td>149</td>
<td>60</td>
<td>33</td>
</tr>
<tr>
<td>Norm Di Pasquale</td>
<td>Councillor</td>
<td>Councillor Ward 11 - University-Rosedale</td>
<td>3,427</td>
<td>343</td>
<td>10%</td>
<td>92</td>
<td>171</td>
<td>151</td>
<td>68</td>
<td>29</td>
</tr>
<tr>
<td>Simon Fogel</td>
<td>Councillor</td>
<td>Councillor Ward 9 - Davenport</td>
<td>1,523</td>
<td>322</td>
<td>21%</td>
<td>140</td>
<td>227</td>
<td>114</td>
<td>41</td>
<td>57</td>
</tr>
<tr>
<td>Dianne Saxe</td>
<td>Councillor</td>
<td>Councillor Ward 11 - University-Rosedale</td>
<td>2,368</td>
<td>294</td>
<td>12%</td>
<td>80</td>
<td>156</td>
<td>131</td>
<td>58</td>
<td>28</td>
</tr>
<tr>
<td>Josh Matlow (@JoshMatlow)</td>
<td>Councillor</td>
<td>Councillor Ward 12 - Toronto-St. Paul’s</td>
<td>1,935</td>
<td>251</td>
<td>13%</td>
<td>77</td>
<td>142</td>
<td>103</td>
<td>28</td>
<td>22</td>
</tr>
<tr>
<td>Brad Bradford (@BradMBradford)</td>
<td>Councillor</td>
<td>Councillor Ward 19 - Beaches-East York</td>
<td>1,739</td>
<td>250</td>
<td>14%</td>
<td>90</td>
<td>164</td>
<td>88</td>
<td>33</td>
<td>37</td>
</tr>
<tr>
<td>Shelley Carroll</td>
<td>Councillor</td>
<td>Councillor Ward 17 - Don Valley North</td>
<td>1,531</td>
<td>239</td>
<td>16%</td>
<td>99</td>
<td>174</td>
<td>53</td>
<td>51</td>
<td>27</td>
</tr>
</tbody>
</table>
Winnipeg: Top 10 Accounts with the Most Abusive Tweets

You can explore all of our Winnipeg data at https://www.samaracentre.ca/articles/sambot-winnipeg-election

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Candidate Type</th>
<th>Ward</th>
<th>Total Tweets</th>
<th>Abusive</th>
<th>Percent. Abusive (%)</th>
<th>Toxic</th>
<th>Insults</th>
<th>Threats</th>
<th>Identity Attacks</th>
<th>Sexually Explicit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jenny Motkaluk</td>
<td>Mayor</td>
<td>N/A</td>
<td>3,729</td>
<td>1,076</td>
<td>29%</td>
<td>494</td>
<td>783</td>
<td>247</td>
<td>348</td>
<td>91</td>
</tr>
<tr>
<td>Glen Murray</td>
<td>Mayor</td>
<td>N/A</td>
<td>2,465</td>
<td>432</td>
<td>18%</td>
<td>207</td>
<td>300</td>
<td>121</td>
<td>74</td>
<td>90</td>
</tr>
<tr>
<td>Omar Kinnarath</td>
<td>Councillor</td>
<td>Daniel McIntyre</td>
<td>682</td>
<td>152</td>
<td>22%</td>
<td>63</td>
<td>90</td>
<td>61</td>
<td>50</td>
<td>19</td>
</tr>
<tr>
<td>Rick Shone</td>
<td>Mayor</td>
<td>N/A</td>
<td>1,337</td>
<td>148</td>
<td>11%</td>
<td>37</td>
<td>78</td>
<td>55</td>
<td>23</td>
<td>19</td>
</tr>
<tr>
<td>Rebecca Chambers</td>
<td>School Trustee</td>
<td>Winnipeg School Division Ward 4</td>
<td>1,305</td>
<td>135</td>
<td>10%</td>
<td>36</td>
<td>72</td>
<td>51</td>
<td>29</td>
<td>17</td>
</tr>
<tr>
<td>Chris Sigurdson</td>
<td>School Trustee</td>
<td>Louis Riel School Division Ward 2</td>
<td>2,069</td>
<td>126</td>
<td>6%</td>
<td>14</td>
<td>27</td>
<td>83</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>Hannah Mihychuk Marshall</td>
<td>School Trustee</td>
<td>Winnipeg School Division Ward 3</td>
<td>495</td>
<td>124</td>
<td>25%</td>
<td>68</td>
<td>104</td>
<td>22</td>
<td>27</td>
<td>16</td>
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<tr>
<td>Scott Gillingham</td>
<td>Mayor</td>
<td>N/A</td>
<td>1,260</td>
<td>119</td>
<td>9%</td>
<td>32</td>
<td>66</td>
<td>44</td>
<td>21</td>
<td>21</td>
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<tr>
<td>Rana Bokhari</td>
<td>Mayor</td>
<td>N/A</td>
<td>1,044</td>
<td>114</td>
<td>11%</td>
<td>29</td>
<td>61</td>
<td>40</td>
<td>25</td>
<td>10</td>
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<tr>
<td>Gus Watanabe</td>
<td>School Trustee</td>
<td>St. James - Assiniboia School Division West Ward</td>
<td>505</td>
<td>84</td>
<td>17%</td>
<td>31</td>
<td>62</td>
<td>19</td>
<td>19</td>
<td>10</td>
</tr>
</tbody>
</table>
Charlottetown: Top 10 Accounts with the Most Abusive Tweets

You can explore all of our Charlottetown data at [https://www.samaracentre.ca/articles/sambot-charlottetown-election](https://www.samaracentre.ca/articles/sambot-charlottetown-election)

<table>
<thead>
<tr>
<th>Candidate</th>
<th>Candidate Type</th>
<th>Ward</th>
<th>Total Tweets</th>
<th>Abusive</th>
<th>Percent. Abusive (%)</th>
<th>Toxic</th>
<th>Insults</th>
<th>Threats</th>
<th>Identity Attacks</th>
<th>Sexually Explicit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel Mullen</td>
<td>Mayor</td>
<td>N/A</td>
<td>431</td>
<td>69</td>
<td>16%</td>
<td>38</td>
<td>47</td>
<td>22</td>
<td>12</td>
<td>8</td>
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<tr>
<td>Charlene Wight</td>
<td>Councillor</td>
<td>Councillor Ward 8</td>
<td>360</td>
<td>37</td>
<td>10%</td>
<td>15</td>
<td>14</td>
<td>18</td>
<td>1</td>
<td>11</td>
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<tr>
<td>Barbara Dylla</td>
<td>Councillor</td>
<td>Councillor Ward 4</td>
<td>134</td>
<td>4</td>
<td>3%</td>
<td>1</td>
<td>1</td>
<td>3</td>
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<td>0</td>
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<tr>
<td>Philip Brown</td>
<td>Mayor</td>
<td>N/A</td>
<td>118</td>
<td>8</td>
<td>7%</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Cecil Francis Villard</td>
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<td>113</td>
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<td>6%</td>
<td>2</td>
<td>5</td>
<td>2</td>
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<td>1</td>
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<tr>
<td>Daniel Cousins</td>
<td>Councillor</td>
<td>Councillor Ward 5</td>
<td>110</td>
<td>7</td>
<td>6%</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Joanna Morrison</td>
<td>Councillor</td>
<td>Councillor Ward 1</td>
<td>109</td>
<td>3</td>
<td>3%</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<td>1</td>
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<tr>
<td>Eric McMurray</td>
<td>Councillor</td>
<td>Councillor Ward 2</td>
<td>44</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Norman Beck</td>
<td>Councillor</td>
<td>Councillor Ward 3</td>
<td>38</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>Wendi James Poririer</td>
<td>Councillor</td>
<td>Councillor Ward 2</td>
<td>29</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
References


