Datasheet for OpenDataToronto's Fire Incidents*

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Extract of the questions from Gebru et al. (2021).

Motivation

1. *For what purpose was the dataset created? Was there a specific task in mind? Was there a specific gap that needed to be filled? Please provide a description.*

   - The dataset provides more detailed information compared to the basic dataset that the Toronto Fire Service (TFS) responds to. The dataset was acquired through Toronto's Open Data which is an open source delivery tool that aims to connects people and data. These publicly available datasets are targeted towards various demographics such as app developers, students, or citizens.

2. *Who created the dataset (for example, which team, research group) and on behalf of which entity (for example, company, institution, organization)?*

   - Toronto's Open Data, an open data initiative by the City of Toronto government.

3. *Who funded the creation of the dataset? If there is an associated grant, please provide the name of the grantor and the grant name and number.*

   - No funding was received.

4. *Any other comments?*

   - No.

Composition

1. *What do the instances that comprise the dataset represent (for example, documents, photos, people, countries)? Are there multiple types of instances (for example, movies, users, and ratings; people and interactions between them; nodes and edges)? Please provide a description.*

- Each row of the dataset is an individual instance of a fire incident that is recorded. Each column represents a specific point of information for each incident.

2. *How many instances are there in total (of each type, if appropriate)?*

    - 29425

3. *Does the dataset contain all possible instances or is it a sample (not necessarily random) of instances from a larger set? If the dataset is a sample, then what is the larger set? Is the sample representative of the larger set (for example, geographic coverage)? If so, please describe how this representativeness was validated/verified. If it is not representative of the larger set, please describe why not (for example, to cover a more diverse range of instances, because instances were withheld or unavailable).*

    - All individuals included in the dataset are reported by the Ontario Fire Marshal (OFM) up to December 31, 2022. Incidents in the dataset that include incomplete data may be under investigation or is classified as a no loss outdoor fire. Some incidents have been excluded pursuant to exemptions under Section 8 of Municipal Freedom of Information and Protection of Privacy Act (MFIPPA). For privacy purposes, all personal information regarding the fire incidents have not been included in the dataset.

4. *What data does each instance consist of? "Raw" data (for example, unprocessed text or images) or features? In either case, please provide a description.*

    - Each instance consists of information regarding the fire incident such as the time that the TFS received an emergency call to the time the respondents have arrived at the scene, estimated loss in damages, the classified source of the incident, etc. Various classifications for each incident was used throughout the dataset

5. *Is there a label or target associated with each instance? If so, please provide a description.*

    - Yes, there is a unique id associated with each instance. This id is a unique number that represents the incident in the dataset.

6. *Is any information missing from individual instances? If so, please provide a description, explaining why this information is missing (for example, because it was unavailable). This does not include intentionally removed information, but might include, for example, redacted text.*

    - Yes, there is missing information throughout the raw dataset. Information such as area of origin, building status, building impact, estimated dollars loss due to damages, and more. This information is likely unavailable due to ongoing investigations or information that was never recorded or received.

7. *Are relationships between individual instances made explicit (for example, users' movie ratings, social network links)? If so, please describe how these relationships are made explicit.*

- No, ther eare no relationships between instances.

8. *Are there recommended data splits (for example, training, development/validation, testing)? If so, please provide a description of these splits, explaining the rationale behind them.*

    - No.

9. *Are there any errors, sources of noise, or redundancies in the dataset? If so, please provide a description.*

    - No.

10. *Is the dataset self-contained, or does it link to or otherwise rely on external resources (for example, websites, tweets, other datasets)? If it links to or relies on external resources, a) are there guarantees that they will exist, and remain constant, over time; b) are there official archival versions of the complete dataset (that is, including the external resources as they existed at the time the dataset was created); c) are there any restrictions (for example, licenses, fees) associated with any of the external resources that might apply to a dataset consumer? Please provide descriptions of all external resources and any restrictions associated with them, as well as links or other access points, as appropriate.*

    - Self-contained.

11. *Does the dataset contain data that might be considered confidential (for example, data that is protected by legal privilege or by doctor-patient confidentiality, data that includes the content of individuals' non-public communications)? If so, please provide a description.*

    - No.

12. *Does the dataset contain data that, if viewed directly, might be offensive, insulting, threatening, or might otherwise cause anxiety? If so, please describe why.*

    - No.

13. *Does the dataset identify any sub-populations (for example, by age, gender)? If so, please describe how these subpopulations are identified and provide a description of their respective distributions within the dataset.*

    - No.

14. *Is it possible to identify individuals (that is, one or more natural persons), either directly or indirectly (that is, in combination with other data) from the dataset? If so, please describe how.*

    - No.

15. *Does the dataset contain data that might be considered sensitive in any way (for example, data that reveals race or ethnic origins, sexual orientations, religious beliefs, political*

opinions or union memberships, or locations; financial or health data; biometric or ge-
netic data; forms of government identification, such as social security numbers; criminal
history)? If so, please provide a description.

- No.

16. *Any other comments?*

- No.

Collection process

1. *How was the data associated with each instance acquired? Was the data directly observable (for example, raw text, movie ratings), reported by subjects (for example, survey responses), or indirectly inferred/derived from other data (for example, part-of-speech tags, model-based guesses for age or language)? If the data was reported by subjects or indirectly inferred/derived from other data, was the data validated/verified? If so, please describe how.*

- The data was gathered by the TFS throughout the occurrence of the incident, first beginning with a emergency phone call or report of a fire incident. Information such as estimated loss in damages is likely reported by the victims of the incident. A collaborative effort to collect information throughout the process.

2. *What mechanisms or procedures were used to collect the data (for example, hardware apparatuses or sensors, manual human curation, software programs, software APIs)? How were these mechanisms or procedures validated?*

- Telephone. Citizen reports and trained operators at the TFS.

3. *If the dataset is a sample from a larger set, what was the sampling strategy (for example, deterministic, probabilistic with specific sampling probabilities)?*

- The dataset is not a sample from a larger set.

4. *Who was involved in the data collection process (for example, students, crowdworkers, contractors) and how were they compensated (for example, how much were crowdworkers paid)?*

- Emergency call operators, firefighters, and citizens. Emergency dispatchers and firefighters classify as government employees and have their salaries publicly available by the Canadian government. Citizens that provide information are voluntary and do not receive monetary gain.

5. *Over what timeframe was the data collected? Does this timeframe match the creation timeframe of the data associated with the instances (for example, recent crawl of old news articles)? If not, please describe the timeframe in which the data associated with the instances was created.*

- The dataset contains fire incidents from 2011 to 2022 which accurately represents the time frame of the data.

6. *Were any ethical review processes conducted (for example, by an institutional review board)? If so, please provide a description of these review processes, including the outcomes, as well as a link or other access point to any supporting documentation.*

   - No.

7. *Did you collect the data from the individuals in question directly, or obtain it via third parties or other sources (for example, websites)?*

   - The data was obtained from Toronto's Open Data which was published by Toronto Fire Services.

8. *Were the individuals in question notified about the data collection? If so, please describe (or show with screenshots or other information) how notice was provided, and provide a link or other access point to, or otherwise reproduce, the exact language of the notification itself.*

   - Information is recorded by the government and associated government services. All 911 emergency calls are recorded for government records and all information protected through the MFIPPA (Municipal Freedom of Information and Protection of Privacy Act) will not be disclosed.

9. *Did the individuals in question consent to the collection and use of their data? If so, please describe (or show with screenshots or other information) how consent was requested and provided, and provide a link or other access point to, or otherwise reproduce, the exact language to which the individuals consented.*

   - All individuals are subject to the MFIPPA and have the information concerning the incident recorded for government records.

10. *If consent was obtained, were the consenting individuals provided with a mechanism to revoke their consent in the future or for certain uses? If so, please provide a description, as well as a link or other access point to the mechanism (if appropriate).*

    - Information collected has revoked personal information for privacy purposes. Government records are subject to the MFIPPA.

11. *Has an analysis of the potential impact of the dataset and its use on data subjects (for example, a data protection impact analysis) been conducted? If so, please provide a description of this analysis, including the outcomes, as well as a link or other access point to any supporting documentation.*

    - No.

12. *Any other comments?*

- No.

Preprocessing/cleaning/labeling

1. *Was any preprocessing/cleaning/labeling of the data done (for example, discretization or bucketing, tokenization, part-of-speech tagging, SIFT feature extraction, removal of instances, processing of missing values)? If so, please provide a description. If not, you may skip the remaining questions in this section.*

    - No, no cleaning has been stated.

2. *Was the "raw" data saved in addition to the preprocessed/cleaned/labeled data (for example, to support unanticipated future uses)? If so, please provide a link or other access point to the "raw" data.*

    - No.

3. *Is the software that was used to preprocess/clean/label the data available? If so, please provide a link or other access point.*

    - None that is disclosed.

4. *Any other comments?*

    - No.

Uses

1. *Has the dataset been used for any tasks already? If so, please provide a description.*

    - No.

2. *Is there a repository that links to any or all papers or systems that use the dataset? If so, please provide a link or other access point.*

    - No.

3. *What (other) tasks could the dataset be used for?*

    - General fire prevention measures.

4. *Is there anything about the composition of the dataset or the way it was collected and preprocessed/cleaned/labeled that might impact future uses? For example, is there anything that a dataset consumer might need to know to avoid uses that could result in unfair treatment of individuals or groups (for example, stereotyping, quality of service issues) or other risks or harms (for example, legal risks, financial harms)? If so, please provide a description. Is there anything a dataset consumer could do to mitigate these risks or harms?*

    - No.

5. *Are there tasks for which the dataset should not be used? If so, please provide a description.*

   - No.

6. *Any other comments?*

   - No.

Distribution

1. *Will the dataset be distributed to third parties outside of the entity (for example, company, institution, organization) on behalf of which the dataset was created? If so, please provide a description.*

   - No.

2. *How will the dataset be distributed (for example, tarball on website, API, GitHub)? Does the dataset have a digital object identifier (DOI)?*

   - The dataset is publicly available at the Open Data portal. It can be downloaded directly, through API request, or the `opendatatoronto` R package.

3. *When will the dataset be distributed?*

   - The dataset is available now.

4. *Will the dataset be distributed under a copyright or other intellectual property (IP) license, and/or under applicable terms of use (ToU)? If so, please describe this license and/ or ToU, and provide a link or other access point to, or otherwise reproduce, any relevant licensing terms or ToU, as well as any fees associated with these restrictions.*

   - The dataset is subject to Ontario's Open Government Licence outlined in the Open Data website.

5. *Have any third parties imposed IP-based or other restrictions on the data associated with the instances? If so, please describe these restrictions, and provide a link or other access point to, or otherwise reproduce, any relevant licensing terms, as well as any fees associated with these restrictions.*

   - No.

6. *Do any export controls or other regulatory restrictions apply to the dataset or to individual instances? If so, please describe these restrictions, and provide a link or other access point to, or otherwise reproduce, any supporting documentation.*

   - No.

7. *Any other comments?*

   - No.

Maintenance

1. *Who will be supporting/hosting/maintaining the dataset?*

   - The dataset is maintained by Toronto's Open Data and the TFS.

2. *How can the owner/curator/manager of the dataset be contacted (for example, email address)?*

   - The publisher of the dataset can be contacted at the provided email address.

3. *Is there an erratum? If so, please provide a link or other access point.*

   - No.

4. *Will the dataset be updated (for example, to correct labeling errors, add new instances, delete instances)? If so, please describe how often, by whom, and how updates will be communicated to dataset consumers (for example, mailing list, GitHub)?*

   - Yes, the dataset is stated to refresh annually. It appears as through the data is refreshed daily automatically.

5. *If the dataset relates to people, are there applicable limits on the retention of the data associated with the instances (for example, were the individuals in question told that their data would be retained for a fixed period of time and then deleted)? If so, please describe these limits and explain how they will be enforced.*

   - No.

6. *Will older versions of the dataset continue to be supported/hosted/maintained? If so, please describe how. If not, please describe how its obsolescence will be communicated to dataset consumers.*

   - No.

7. *If others want to extend/augment/build on/contribute to the dataset, is there a mechanism for them to do so? If so, please provide a description. Will these contributions be validated/verified? If so, please describe how. If not, why not? Is there a process for communicating/distributing these contributions to dataset consumers? If so, please provide a description.*

   - No.

8. *Any other comments?*

   - No.

References

Gebru, Timnit, Jamie Morgenstern, Briana Vecchione, Jennifer Wortman Vaughan, Hanna Wallach, Hal Daumé Iii, and Kate Crawford. 2021. "Datasheets for Datasets." *Communications of the ACM* 64 (12): 86–92.