
Open Data Practices in Engineering

A Data Management Plan created using DMP Assistant

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Project abstract:

Investigation into open data practices amongst engineering researchers at UBC. What types of data are being generated will be explored as well as if and how researchers are sharing their data. In addition to surveying engineering researchers, this study proposes to survey engineering librarians on data services provided at their institutions.

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Data Collection

What types of data will you collect, create, acquire and/or record?

Textual data from Qualtrics surveys.
.txt, .csv

What file formats will your data be collected? Will these formats allow for data re-use, sharing and long-term access to the data?

Qualtrics survey data will be exported as .csv files. .txt files will be saved from data collection notes.
File formats allow for data re-use and long-term access to files.

What conventions and procedures will you use to structure, name and version-control your files to help you and others better understand how your data are organized?

Files will have the following file naming conventions:

- Dates: YYYYMMDD
- Unique identifier: EngDataSharing
- Summary of content of document example: EngDataSharing_survey_resp_20220112_v01.txt
- Use _ as delimiters
- Document versions will be tracked sequentially with v01, v02, etc. and a unique date using YYYYMMDD format

Documentation and Metadata

What documentation will be needed for the data to be read and interpreted correctly in the future?

A readme file will accompany all collected and stored data and will include basic metadata about the project, contributors, method of data collection. Raw survey data will be available by request only.

How will you make sure that documentation is created or captured consistently throughout your project?

Qualtrics survey will manage data collection and files stored as indicated above. Associated files and documents will be stored in the same location as collection data. An OSF project space will manage the components of this project.

If you are using a metadata standard and/or tools to document and describe your data, please list here.

No metadata standard will be used other than file naming convention listed above. The readme file will provide sufficient metadata and will be saved in an open format (.txt file).
Any data deposited to a repository will use the repository's metadata standard.

Storage and Backup

How and where will your data be stored and backed up during your research project?

Data will be saved in the Qualtrics tool until one year after the project's completion. Data will be stored on UBC instance of OneDrive for secure encryption of data and provides backup. OneDrive will be the location for all master copies of the data. A second location will be on my personal UBC Home Drive (h-drive) space. A third copy will be in the OSF project space. However, if any personal or anonymized data is associated with project it will not go into the OSF space -- only the metadata will be provided. These three options provide both storage and back up for all data and documentation associated with the project.

What are the anticipated storage requirements for your project, in terms of storage space (in megabytes, gigabytes, terabytes, etc.) and the length of time you will be storing it?

Only megabytes of data is expected in terms of storage requirements that can easily be managed by UBC's OneDrive. Long term storage will be housed in the repository Scholars Portal Dataverse (Borealis) for public access. This will be linked to the OSF project space.

How will the research team and other collaborators access, modify, and contribute data throughout the project?

It is anticipated that there will only be one person accessing and working with the data throughout the project.

Data Preservation

Where will you deposit your data for long-term preservation and access at the end of your research project?

Scholars Portal (Borealis) Dataverse will be the location for data deposit and will provide access at the end of the research project. A link to Dataverse in the OSF project space will also be available.

Indicate how you will ensure your data is preservation ready. Consider preservation-friendly file formats, ensuring file integrity, anonymization and de-identification, and inclusion of supporting documentation.

Data will be shared in .csv format. Readme file will be a .txt format.

Data Sharing and Reuse

What data will you be sharing and in what form? (e.g. raw, processed, analyzed, final).

Raw data from the survey will be shared by request set up in Borealis Dataverse.

If the way you store and share data during your research project differs from how you will preserve your data long-term, include a brief description of any resources needed to share your data (equipment, systems, expertise, etc.).

Question not answered.

Have you considered what type of end-user license to include with your data?

An Open Data Commons (ODC-BY) license that allows for attribution and re-use will be applied to the data associated with the project.

What steps will be taken to help the research community know that your data exists?

Data will be shared in UBC institutional repository Scholars Portal (Borealis) Dataverse that will generate a DOI for the data that can easily be shared with any associated documents, reports or publications.

Responsibilities and Resources

Identify who will be responsible for managing this project's data during and after the project and the major data management tasks for which they will be responsible.

The PI will be responsible for managing the project's data for the entire data life cycle.

How will responsibilities for managing data activities be handled if substantive changes happen in the personnel overseeing the project's data, including a change of Principal Investigator?

N/A

What resources will you require to implement your data management plan? What do you estimate the overall cost for data management to be?

No cost associated. UBC provides storage and OSF is free.

Ethics and Legal Compliance

If your research project includes sensitive data, how will you ensure that it is securely managed and accessible only to approved members of the project?

N/A

If applicable, what strategies will you undertake to address secondary uses of sensitive data?

N/A

How will you manage legal, ethical, and intellectual property issues?

N/A