Literature review on the use of drones in parcel delivery.

A Data Management Plan created using DMP Assistant

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Template: Portage Template for Systematic Reviews

Project abstract:

Drones, also referred to as unmanned aerial vehicles (UAVs), are reshaping the last-mile delivery industry. This study of the literature examines how drone technology can be used for last-mile delivery while highlighting its effectiveness, affordability, and environmental advantages. However, it also discusses the significant difficulties that have influenced the present use of drone delivery systems, such as safety, complex regulatory issues, and public acceptance.

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Data Collection

What types of data will you collect, create, link to, acquire and/or record in each of the different stages of the systematic review?

The data that I will collect will mainly be journals and conference papers that will address the related branches of my research.
Keywords that will be used to find relevant research papers:
General keywords:

- Drones, Unmanned Arial Vehicles (UAVs).
- Parcel delivery, Last-mile delivery, Package Delivery, Shipping, Commercial Drones.

Social Impacts branch keywords:

- Social impacts, Public Acceptance, Privacy Violations, Ethical issues.

Regulations branch keywords:

- Policy, Regulations.

Sustainability branch keywords:

- Energy Consumption, Greenhouse Gas Emissions, Life Cycle, Energy Demand, Carbon Emissions.

Charging Stations Locations keywords:

- Charging Station Planning, Station Coverage, Deployment of Charging Stations.

Way Finding keywords:

- Routing, Logistics, Trajectory Planning, Trajectory Optimisation, Scheduling, Navigation Methods.

Economic Viability keywords:

- Market Potential, Cost, Economic Assessment.

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

The data will mainly be journal papers that address different branches of last-mile delivery by drones which will be in PDF format most of the time. In some cases to get an exact number or information spreadsheets of the data can be collected.

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?

To keep track of the files and the progress, will start with an Excel file that contains all names of papers that will be part of the literature review sorted into groups that follow the above-mentioned branches. The next step will be to create a folder with all the original PDF copies' named as follows:
BranchName_VersionNumber_FirstFourWordsofTitle.
The Version Number will be needed to differentiate between the original paper and the ones with notes and comments. For the writing progress, each branch will be written in a Word file with a version number to track the progress.

Documentation and Metadata

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

An Excel file with the names and links of each paper alongside the branch or branches that the paper is related to. The Excel file will be updated with a detailed objective for each paper.

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

The data will be kept in One Drive, in addition to a local copy of the files on my personal laptop.

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

NA

Storage and Backup

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?

As the project will be a literature review, the storage needed is not that big as the data are mainly PDF files alongside Word files that will be used to write the paper itself.

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

Data and progress reports will be stored in One Drive that my supervisor has access to. In addition, a local copy of all the files will be saved on my laptop.

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

As the primary data will be stored on One Drive, all the collaborators have access to it. For now, Dr. Moataz is my only supervisor and he is the one that has access to the data and progress.

Preservation

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

At the end of the research, a literature review paper will be published which will contain all the findings alongside the list of papers used. As for the papers they can be found through Google Scholar, Scopus, and Web of Science.

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

The data itself is in PDF format which is considered preservation-friendly.

Sharing and Reuse

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

What will be shared is the main paper alongside the Excel file that has the list of papers sorted into the branches with the highlight and aim of each paper.

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

The end-user will need to have access to Scopus or ScienceDirect.

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

NA

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.

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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?

As this will be a MASc project, there is a very small chance of having a change in the personnel managing data activities.

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

One Drive access and a personal laptop.

Ethics and Legal Compliance

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

There are no sensitive data included in the research.

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

NA

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

NA