# Redback Operations (Project 2 – Wearable tech for Elderlies)

## Part 1: Risk Assessment for Wearable Devices

Dear University Board,

I am part of the team working on the "Elderly Wearable Tech Sensor" project. Our project is focused on developing advanced wearable technologies, specifically tailored for the elderly. These devices, ranging from smartwatches to fitness rings, are designed to improve their quality of life by monitoring health and enhancing social connectivity.

**Current Phase: Utilizing Publicly Available Data**

In this phase, our primary approach involves using datasets available on platforms like Kaggle, which are under public license. These datasets include vital information on conditions like diabetes and mental health, aiding us in refining our device features.

This use of publicly available data ensures we are not directly involving human participants or handling sensitive personal data, thereby aligning with Deakin University's guidelines for projects not classified as 'human research'.

**Sensor Integration and Safety Focus**

Currently, we are in the initial stages of sensor integration. We have acquired some sensors, but testing has not yet commenced. Our immediate goal is not to conduct trials on individuals but to ensure that these sensors function correctly for future data collection.

**Preliminary Testing and Ethical Considerations:**

* **Biocompatibility Testing:** Conduct tests to ensure sensors are compatible with elderly skin.
* **Ease of Use Evaluation:** Assess sensors for user-friendly operation by elderly individuals.
* **Design and Material Assessment:** Evaluate design and materials to prevent health risks or discomfort.
* **Data Deidentification:** Ensure all collected data is deidentified for privacy and confidentiality.

The collection of human data is not meant for research purposes but for practical exercises and tests for the project. All data will be deidentified, and informed consent from any elderly individuals or any participants involved in the project will be obtained.

In line with ethical standards, our focus is predominantly on the safety of these devices. We are dedicated to ensuring that the sensors are suitable for elderly skin, easy to use, and do not cause discomfort or health risks.

**Ethical Compliance and Continuous Monitoring**

We commit to adhering to all relevant safety standards and ethical guidelines, particularly those concerning elder care and data security.

Continuous monitoring and feedback mechanisms will be implemented to ensure the ongoing safety and efficacy of the devices. We will engage with stakeholders, including potential users, to address any emerging concerns.

## Part 2: Data Usage and Ethical Considerations

**Data Usage and Compliance with Ethics**

Our project utilizes datasets that are publicly available and come with clear usage permissions, reducing ethical concerns around data collection. We are fully committed to respecting privacy and confidentiality in line with Deakin University's ethical guidelines and data protection laws.

**Future Data Collection and Ethical Approval**

As our project progresses to involve sensor-based data collection, we will undergo a thorough ethical approval process, as per sections 2.3.3 and 2.4 of Deakin University's guidelines.

Prior to any data collection from sensors, we will ensure that our practices meet the highest standards of ethical integrity and transparency.

**Ensuring Ethical Integrity in AI and Technology Development**

Our commitment extends to the ethical development of AI solutions. We are acutely aware of the ethical implications and responsibilities associated with AI in healthcare.

We assure that any data collected will not be used for purposes other than those intended, such as academic research or publications, without proper approval.

**Conclusion: A Commitment to Ethical Excellence and Elder Care**

In conclusion, our project is grounded in a commitment to ethical excellence and the enhancement of elder care through technology. We are fully dedicated to navigating the complexities of ethical data usage and human research considerations with the utmost responsibility.

We look forward to making a significant positive impact in the field of elderly care through our innovative technological solutions.

Sincerely,

Aman Kag  
Project Leader  
Elderly Wearable Tech Sensor Project Team