Ethics Analysis

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Slides Link:
https://docs.google.com/presentation/d/1KK6x1V
NK48XAWSAhyuu9QjvI26vQRawR1SzAOObsZco/
edit?usp=sharing

Driving Problem

01.

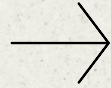"During what time of the day do Sydneysiders walk the most?"
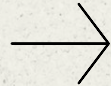
Stakeholders
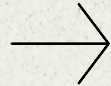
02.

Urban Designers / Planners

Importance $\longrightarrow$ Economic growth
Living environment
Nation's happiness index

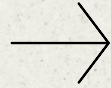Benefits $\longrightarrow$ Clear guidance
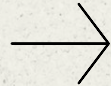
Issues $\longrightarrow$ Bias resistance

Retail Businesses

Importance $\longrightarrow$ Business scaling
Economic growth (4.1% GDP & 10.7% employment)
Consumer satisfaction

Benefits $\longrightarrow$ Location awareness
Optimised operating hours

Issues $\longrightarrow$ Cost (Data Acquisition & Analysis/processing)
Transitioning (Staff & Products/Services)

Data Characterisation

03.

Nature of the Data

- Accelerometer
- Complex Motion algorithm

- ~150,000 users
- Age 12 to 90

- 1st JANUARY – 31st DECEMBER

- Australia Sydney User

Relevant Aspects

Accuracy

Extremely accurate for
daily walking activities
(Veerabhadrappa et al., 2018)

Frequency

Average frequency:
10–100HZ

Uncertainty

Total error of
0.034%(1.07 steps)
(Veerabhadrappa et al., 2018)

Completeness

Limited to users wearing
behaviours

Solution & Effects

Driving Problem »

Discover Apple user's walking behaviour during the day.

»

Urban Designers / Planners

Allocate better resource to benefit certain social class and demographic.

Retail/Business

Understanding specific consumer trends to plan for more profits.

Data

Ownership, Bias, Privacy and Broader Implications

O4.

Ownership and Access

USERS

Delete and Control
Access

THIRD PARTIES

Cloud Storage Providers
Data Processors
Security Providers

APPLE

Access
Gather and Analyse

Data Sharing & Privacy

Ensuring that individual privacy rights are respected

Personal data can undergo anonymization to disassociate it from direct links to user identities.

The corporation maintains the ability to re-identify anonymous data using other information, including serial numbers, in situations where legal duties arise.

Australian Privacy Principles

The Australian Privacy Principles (or APPs) are the cornerstone of the privacy protection framework in the *Privacy Act 1988*. They apply to any organisation or agency the Privacy Act covers.

Apple Privacy Policy

Updated December 22, 2022

Apple's Privacy Policy describes how Apple collects, uses, and shares your personal data.

In addition to this Privacy Policy, we provide data and privacy information embedded in our products and certain features that ask to use your personal data. This product-specific information is accompanied by our Data & Privacy Icon.

Data Collection

O1
- ❏ Compliance with Apple and local laws
- ❏ Transparency in data use and interpretation
- ❏ User consent to share data
- ❏ Protect user data privacy

O2

Users rely on Apple products. However, this reliance does not suggest that Apple's customers are mistreated. Users gain from Apple's data insights analysis, and Apple's product improvements rely on user data, demonstrating a partnership in which the two parties equally exchange data.

Marketing
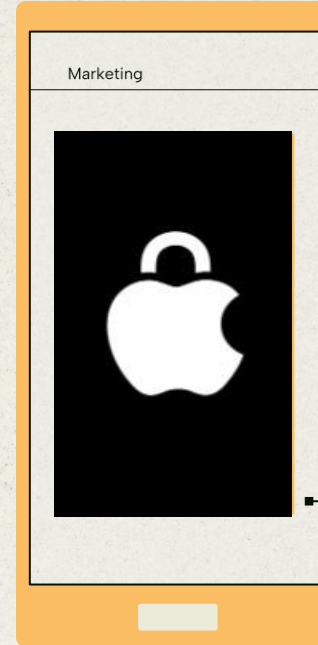
O1

acquiring data

O2

User-Apple Interdependence

Possible Biases

Selection

Only Apple watch data

Many Australians use other
fitness trackers

Omitted-Variable

No tracking of users age or gender.

No time zone / day of the week
differences measured

Broader Implications

1) **Unintended Risks and Issues:**

Biased Data
Needs other research and data for better outcomes
May lead to poor decisions made by stakeholders

2) **Social Implications:**

Societal Pressure
New Norms

3) **Further Benefits:**

Deeper insights into into walking patterns
Fields: Health Policy, Urban Planning, Retail
Managers, General Public Knowledge

REFERENCES

Stakeholder Analysis

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Data Characterisation

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Data
Ownership, Bias, Privacy and Broader Implications

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THANKS!