# The Analysis of Customer Preferences for Ray-Ban Meta Smart Glasses

## Analysis progress reports 1B Part 2


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## 24753 Customer Analytics – Autumn 202

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# 1. Executive Summary

This report presents the findings of a conjoint-based segmentation and preference simulation study aimed at informing product design and market strategy for Ray-Ban Meta smart glasses. Based on responses from 41 qualified participants, we identified three distinct consumer segments and simulated product demand across three product tiers—Vision Lite, Vision Pro, and Vision Elite.

# 2. Advanced Analysis Conducted

## 2.1 Segmentation Analysis

We initially explored demographic segmentation using variables such as age, education, and income to examine differences in part-worth preferences.

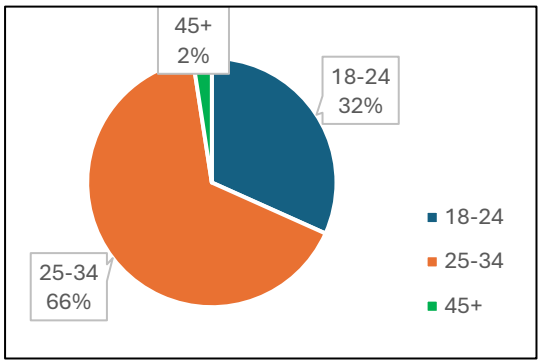


*Figure 1: Pie Chart showing the age breakdown of respondents*

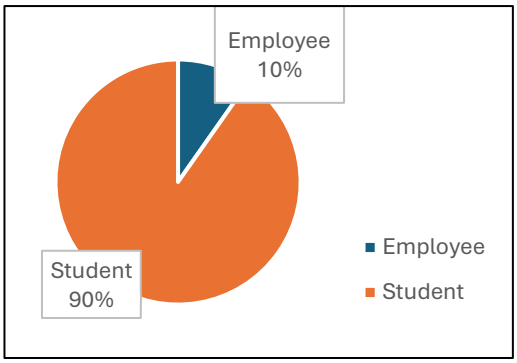


*Figure 2: Pie chart illustrating the employment status of respondents*

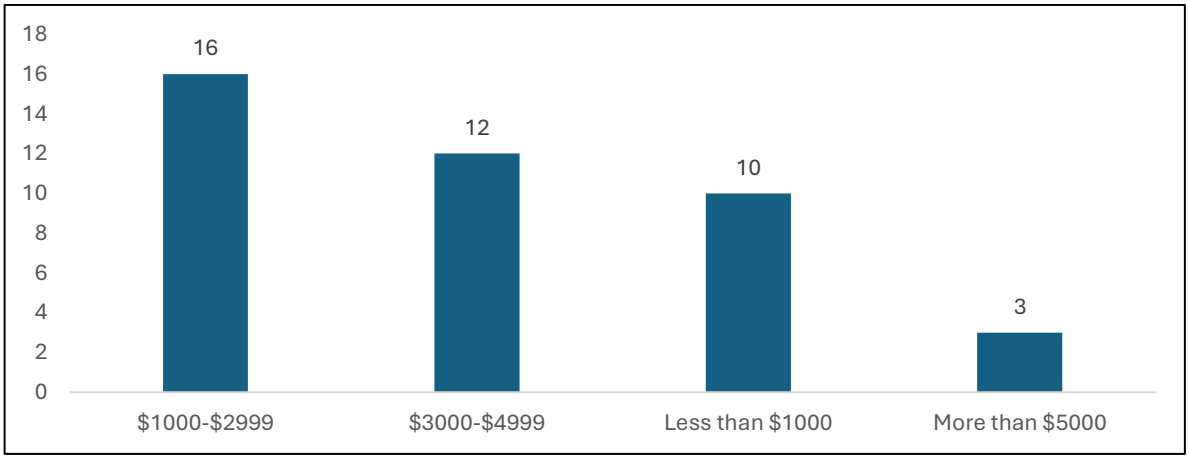


*Figure 3: Bar chart displaying monthly income distribution among respondents*

Demographic segmentation was limited due to a homogeneous sample, primarily students (90%) aged 25–34 (66%) (*Figures 1–2*). Income distribution was more varied (*Figure 3*), but insufficient for deep subgroup comparisons. One minor insight showed higher utility for *Professional3* among graduate-level respondents earning above $3,000. Given these limitations, we focused on **preference-based segmentation using cluster analysis**, which revealed more meaningful differentiation based on utility patterns (*see Section 2.2*).

## 2.2 Clustering Analysis

Using individual-level part-worth estimates, we applied K-Means clustering (k=3) to uncover latent consumer segments based on preference patterns rather than demographic characteristics.

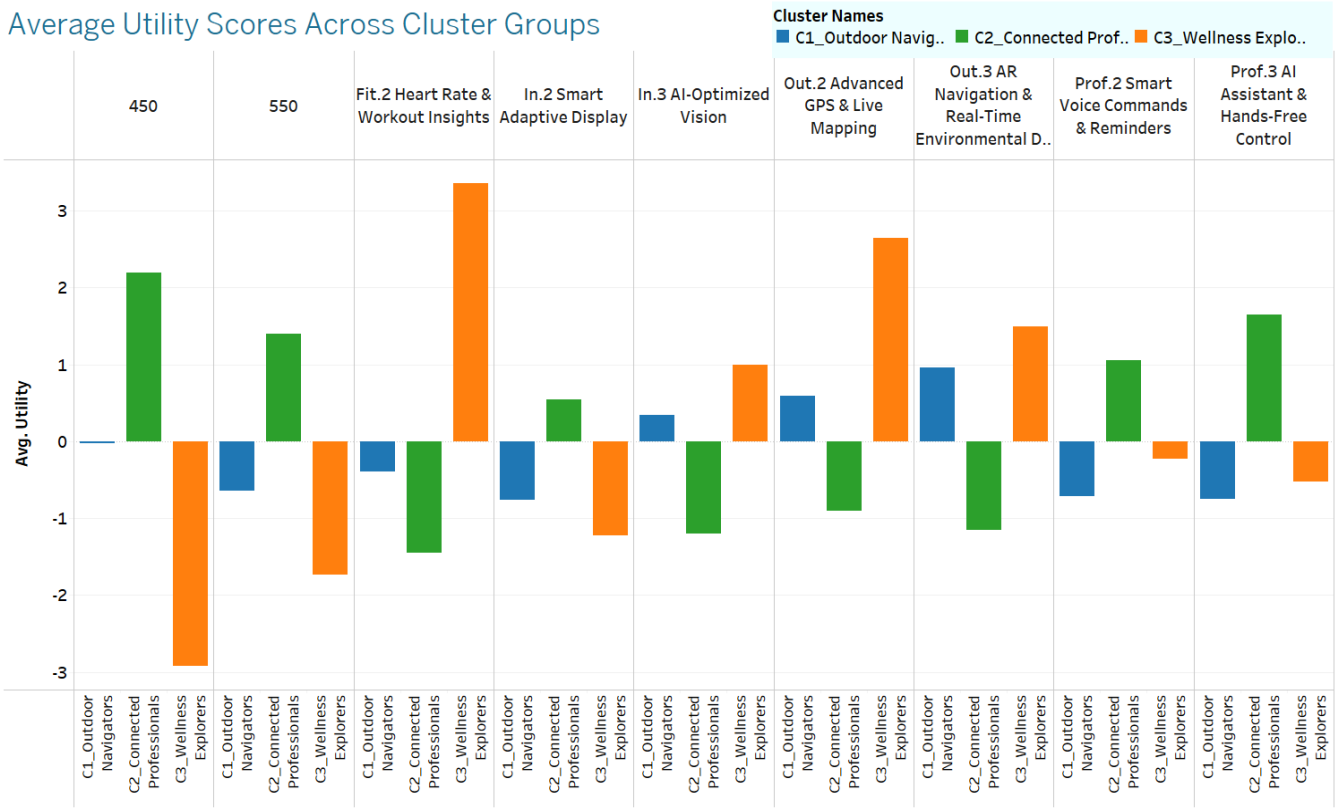


*Figure 4: Feature Preference by Cluster - Average Utility Scores Across Consumer Segments*

| Summary Diagnostics | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Number of Clusters: | 3 | | | | | | | | | |
| Number of Points: | 41 | | | | | | | | | |
| Between-group Sum of Squares: | 9.1839 | | | | | | | | | |
| Within-group Sum of Squares: | 10.612 | | | | | | | | | |
| Total Sum of Squares: | 19.796 | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Clusters | Number of Items | 450 | 550 | Fitness2 | Indoor2 | Indoor3 | Outdoor2 | Outdoor3 | Professional2 | Professional3 |
| Cluster 1 | 13 | -0.0256 | -0.641 | -0.3974 | -0.7564 | 0.34615 | 0.58974 | 0.96154 | -0.71795 | -0.74359 |
| Cluster 2 | 20 | 2.2 | 1.4 | -1.45 | 0.55 | -1.2 | -0.9 | -1.15 | 1.05 | 1.65 |
| Cluster 3 | 8 | -2.9167 | -1.7292 | 3.3542 | -1.2292 | 1 | 2.6458 | 1.5 | -0.22917 | -0.52083 |
| Not Clustered | 0 | | | | | | | | | |

*Figure 5: Cluster Table Output*

*Figures 4 and 5* illustrate clear differences in utility scores across clusters, reinforcing the validity of preference-based segmentation. Notably, clustering was done without including numeric demographic data, as this made most of the fields insignificant.

The following section provides detailed interpretations of each cluster's preferences and defining traits.

## Cluster 1: Outdoor Navigators (n = 13)

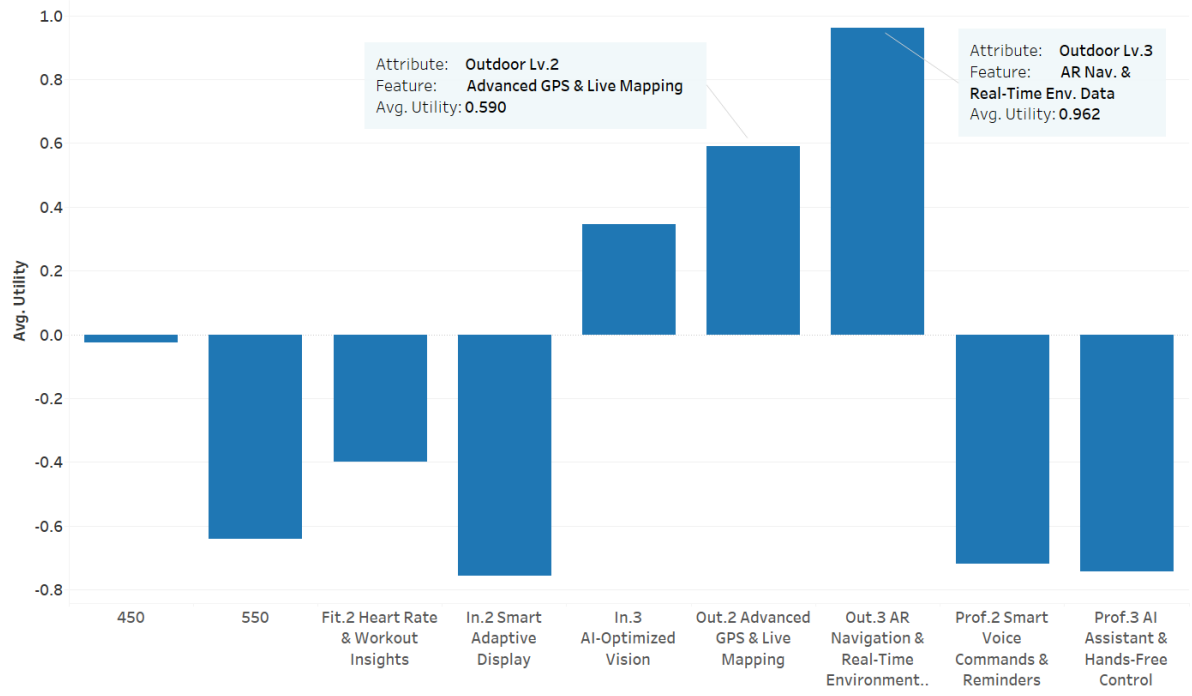


*Figure 6: Feature preference by cluster 1 - Outdoor Navigator*

Strong preference for Outdoor3 (AR Navigation) and Outdoor2 (Advanced GPS), with limited interest in Professional or Fitness features. Show mild price sensitivity and favour the $450 price point.

**Cluster 2: Connected Professionals (n = 20)**


*Figure 7: Feature preference by cluster 2 - Connected Professionals*

Prioritise Professional3 (AI Assistant) and Professional2 (Voice Commands), demonstrating a willingness to pay for enhanced productivity. Low interest in Outdoor and Fitness features.

**Cluster 3: Wellness Explorers (n = 8)**


*Figure 8: Feature preference by cluster 3 - Wellness Explorers*

Value Fitness2 (Heart Rate Insights) and Outdoor2 (GPS), but highly price-sensitive—rejecting higher-priced options like $450 or $550.

## 2.3 Preference Simulation

The utility score for each respondent was calculated by summing their part-worth values corresponding to the features in each product profile. These total utilities were then analyzed across all 41 respondents to simulate demand preferences for each product concept.

| Profile Tier | Key Features | Estimated Demand | Rank |
|---|---|---|---|
| **Vision Pro** | $450, Smart Adaptive Display, GPS & Live Mapping, Voice Commands, Heart-Rate Insights | 38% | 1 |
| **Vision Elite** | $550, AI-Optimised Vision, AR Navigation, AI Assistant, Biometric AI Coaching | 35% | 2 |
| **Vision Lite** | $350, Auto-Brightness, Basic GPS & Weather, Distraction-Free Alerts, Step & Calorie Tracking | 27% | 3 |

**Insight:** Vision Pro is the most preferred tier due to its balanced features and mid-range pricing. Vision Elite appeals to tech-forward users, while Vision Lite draws budget-conscious consumers.

## 3. Business Recommendations

Based on the analysis, we derive several strategic recommendations for product positioning, pricing, and feature prioritisation.

**Tiered Product Strategy**:

- Launch **Vision Pro** as the core product to attract the largest segment. Emphasise its balance of affordability and premium features.
- Position **Vision Elite** as a premium, high-tech model for affluent and tech-forward users. Focus messaging on AI productivity and health analytics.
- Offer **Vision Lite** as a budget-friendly entry option for students and early adopters, ensuring broader accessibility.

**Maximise Market Coverage through Targeted Messaging**:

- Segment Campaign size based on user personas from clustering insights. Use channels appropriate to each tier, e.g., fitness influencers and tech bloggers for Elite, outdoor and productivity channels for Pro, and university and discount platforms for Lite.
- Tailor value propositions, for example, "Your AI Coach in Glasses" (Elite), "Smarter Vision Everywhere" (Pro), and "Affordable AR for Everyone" (Lite).

**Collaborative Development**

- Co-create health and navigation features with Wellness Explorers to refine product-market fit.

**Continuous Iteration:**

- Use post-launch sentiment and usage data to adapt pricing, bundles, and features over time.

## 4. Limitations & Future Work

We acknowledge the following limitations in our current study and outline directions for improvement in future iterations:

- Small and demographically limited sample size
- No interaction effects tested between features
- Cluster validation could be improved with additional behaviour-based data
- Future work may include more profiles, adaptive conjoint design, or real-market testing

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