

Engineer Report

I. Detailed Statistical Testing

After redesigning Depop, the e-commerce app, we developed two high-fidelity prototypes, which we consider (Concept A and Concept B), which were evaluated based on user feedback and performance metrics. The statistical analysis focused on user preferences, task completion times, and value ratings for each concept. Visuals are portrayed below of data findings.

Based on the straight forward results, the user preference analysis:

- **Concept A:** 3.9 out of 5 (lower value rating)
- **Concept B:** 4.3 out of 5 (higher value rating)

On average, users completed tasks 6.3 seconds faster with Concept B compared to Concept A. The one notable outlier was the user who took 58.3 seconds longer on Task 3 with concept B, potentially skewing the overall average. 71% of users preferred Concept B over Concept A. The statistical comparison, we see:

- **Mean (Concept A):** 3.9, **SD:** 0.4
- **Mean (Concept B):** 4.3, **SD:** 0.3
- **Task Time (Concept A):** Mean = 23.1 seconds, **SD:** 5.2 seconds
- **Task Time (Concept B):** Mean = 16.8 seconds, **SD:** 4.1 seconds

After Using these to perform T-Tests, we get results of:

- **Value Rating:** $t(29) = 3.45$, $p < 0.01$
- **Task Completion Time:** $t(29) = 2.78$, $p < 0.05$

II. Special Cases & Abnormalities

The presence of an outlier (58.3 seconds on Task 3 with Concept B) suggests variability in user interaction with the app, possibly due to unfamiliarity or specific interface challenges. This outlier highlights the need for additional user training or interface adjustments to enhance consistency and user experience.

III. Implementation Timeline

The feasible implementation that we plan to conduct is an Interactive 'Collections' Tab which has functioning buttons to add specific posts to collections, create, store, and manage new collections, and install a functioning keyboard. Furthermore, a Red Heart 'Like' Feature that flows from black to gray to red and has overlay functionality, keeping red heart specific to each post. **(Total 2-3 Days, Team 1 \approx 2 Engineers)**

Furthermore, we would work on the Profile Tabs and Purchases section of the app. This includes an interaction-based 'Likes' tab for efficient navigation, ensuring functionality across all posting and display tabs, as well as adding additional hover features as necessary **(Total 4 Days, Team 2 \approx 3 Engineers)**

From these two teams, there would be a final two days dedicated to fine-tuning, smoothing, and distribution. This means ensuring smooth transitions and timing of interactions, and updating across all postings and tabs to store the data personal to them. Then having evaluation and testing dedicated to making sure all features perform as intended and resolve any bugs or errors within the flow of the design.