**TripRace – Process Evidence and Daily Documentation**

**Team:** Lost & Found  
**Course:** DECO3500 Social and Mobile Computing  
**University:** The University of Queensland

**Research Evidence**

**Goal**  
To understand the social challenges behind group travel decision-making—how disagreements, passive participants, and indecision lead to frustration and inefficiency.

**Methods & Findings**

* **Academic Foundations**
  + *García-Zamora et al. (2022)*: emphasized fairness and transparency in group decision-making.
  + *Song et al. (2018)*: highlighted dominance in group travel discussions and the need for balanced participation.
  + *Liu (2022)*: advocated for context-aware mobile systems to enhance collaborative interaction.
* **User Interviews & Observations**
  + Participants often stay silent to “keep harmony.”
  + Common pain points: conflict, indecision, and chaotic group chats.
* **User Quotes**
  + *Sarah (21)*: “If I suggest twice, I feel annoying… so I just stop talking.”
  + *Ethan (31)*: “This game replaced verbal conflict with shared action.”
* **Key Insights**
  + Group decisions should be **faster**, **fairer**, and **more enjoyable**.
  + Gamification and mobile interaction can effectively achieve this balance.

**Design Artefacts**

**Figma Prototype:**  
[TripRace Figma Prototype](https://www.figma.com/design/hWCfDljwTbORcZLFTnJ1U0/Triprace" \t "_new)

**Design Outputs**

* **Sketches & Wireframes**
  + Wireframes showing flow of “Lobby → Idea Input → Race → Results” at low fidelity.
* **Mid/High-Fidelity Prototype**
  + Each ⭐ star represents a player’s travel idea.
  + Added labels or icons to better communicate ownership of each star.
* **Interface Enhancements**
  + Created a “How to Play” overlay and improved control physics and audio feedback.

**Flow Diagram**

Lobby → Submit Idea (⭐) → Multiplayer Race → Vote Count → Final Decision

**Visual Style**

* Bright travel-inspired color palette (blue + yellow).
* Mobile-first layout for smooth multiplayer interaction.

**Development Evidence**

**Key Functional Features**

* Multiplayer (synced in realtime via Mirror).
* Room shared by all players: all spawn in room together; stars and obstacles generated by server.
* ⭐ vote; crashing into obstacle = freeze for 1sec.
* Leader has votes worth twice as much, to balance and encourage.

**Core Technologies**

* Unity + Mirror Networking
* Networked Room System (RunCarNetworkManager, RoomManager)
* Figma-to-Unity UI integration
* Network spawning via NetworkServer.Spawn()

**Architecture Overview**

MainMenu → RoomScene → GameScene

Player.cs — Controls car movement and collisions

NetworkManager — Syncs game state

GameManager — Calculates distance and vote results

**Development Sprints**

| **Sprint** | **Focus** | **Key Deliverables** |
| --- | --- | --- |
| Week 7–8 | Prototype foundation | UI layout & Figma wireframes |
| Week 9–10 | Networking | Multiplayer sync, obstacle spawning |
| Week 11–12 | Optimization | Controls, tutorial, final polish |

**Stand-Up Records**

| **Week** | **Status** | **Achievements** | **Issues/Decisions** | **Next Steps** |
| --- | --- | --- | --- | --- |
| Week 8 | Low-fi prototype done | Core Figma flow complete | Players confused by ⭐ meaning | Add name tags & visual hints |
| Week 9 | First user test | Five sessions conducted | Network delay noted | Optimize synchronization |
| Week 10 | Functional integration | Multiplayer stable | Controls too sensitive | Add sound feedback & smooth physics |
| Week 11 | Final prep | Full build ready | Merge materials | Link README + Poster |
| Week 12 | Tradeshow | Demo successful | Strong audience feedback | Document reflection & wrap-up |

**Supporting Materials & Links**

* **Figma Prototype:**  
  [TripRace Figma](https://www.figma.com/design/hWCfDljwTbORcZLFTnJ1U0/Triprace" \t "_new)
* **Project Website:**  
  [http://project16582636.tilda.ws](http://project16582636.tilda.ws" \t "_new)
* **Promotional Instagram:**  
  [TripRace Instagram Post](https://www.instagram.com/p/DQBtnBeE1nx/?igsh=MW00a2Vsc2lud3BwYw==" \t "_new)
* **README File:**  
  Describes concept, gameplay logic, and academic grounding.
* **Conference Poster & Promotional Materials:**  
  Includes A2 poster, pitch script, and social media campaign.
* **Lost&Found\_4dDesignPrototype.pdf:**  
  Contains research, development, evaluation, and ethical analysis.

**Ethical Considerations**

Following the *Ethics for Interaction Design* framework (Loke & Matthews, 2020):

| **Issue** | **Implementation** |
| --- | --- |
| **Equity of Voice** | One action per player = one vote; votes from top player are weighted twice for engagement. |
| **Privacy** | No login or data storage required; only use of temporary nicknames. |
| **Responsible Gamification** | Brief 1–2 minute session; no addiction loop mechanics. |
| **Social Pressure** | Neutral language (“Group Choice is…”) to not pressure individuals. |
| **Accessibility** | Fast loading on normal mobile devices and bandwidth. |

**Team Contributions**

| **Member** | **Contributions** |
| --- | --- |
| **Yuan Zhao** | Co-developed prototype, wrote brochure |
| **Liyu Chen** | Co-developed prototype, designed UI, poster & report |
| **Yaxin Liu** | Developed promotional website, final report |
| **Sihui Li** | Co-developed prototype, led social media campaign |
| **Minxuan Zhen** | Led social media content and outreach materials |

**Summary**

TripRace is a mobile game that reimagines group travel planning as a playful, fair, and collaborative process.

Gamifying decision-making, it increases engagement, minimizes friction, and makes consensus a joyful experience.

All artefacts (Figma prototype, README, poster, and ethics doc) are publicly available on the team repo and wiki.