WRIST-RELIEF AI

AI-POWERED ERGONOMICS FOR HEALTHIER GAMING

HCI GROUP 4-8

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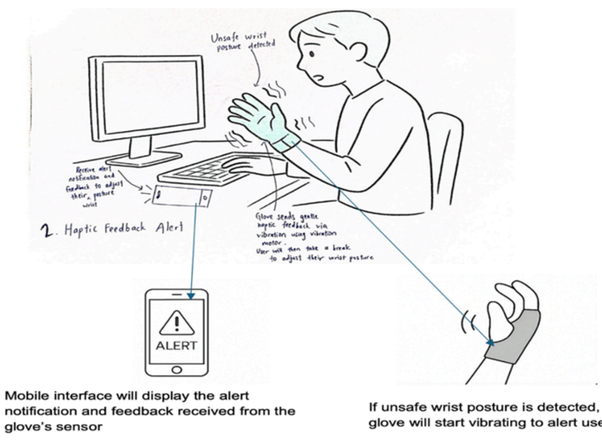
PROBLEM & CONTEXT

Prolonged gaming causes **wrist strain**.
Existing ergonomic solutions **lack real-time adaptation**.

OBJECTIVES

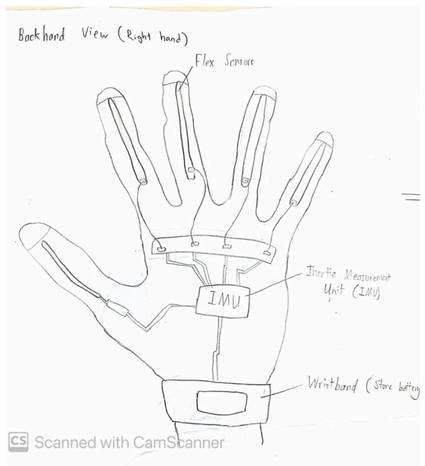
- Detect wrist strain
- Provide real-time feedback
- Prevent injury proactively

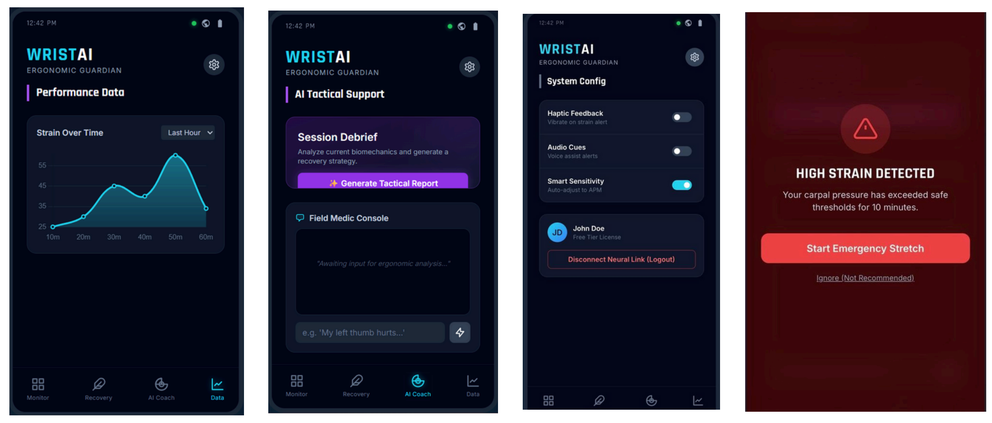
FINAL DESIGN / AI-ERGONOMICS INTERACTION



Mobile interface will display the alert notification and feedback received from the glove's sensor

If unsafe wrist posture is detected, the glove will start vibrating to alert user





DESIGN PROCESS & TESTING

1. Design Research

We surveyed university students

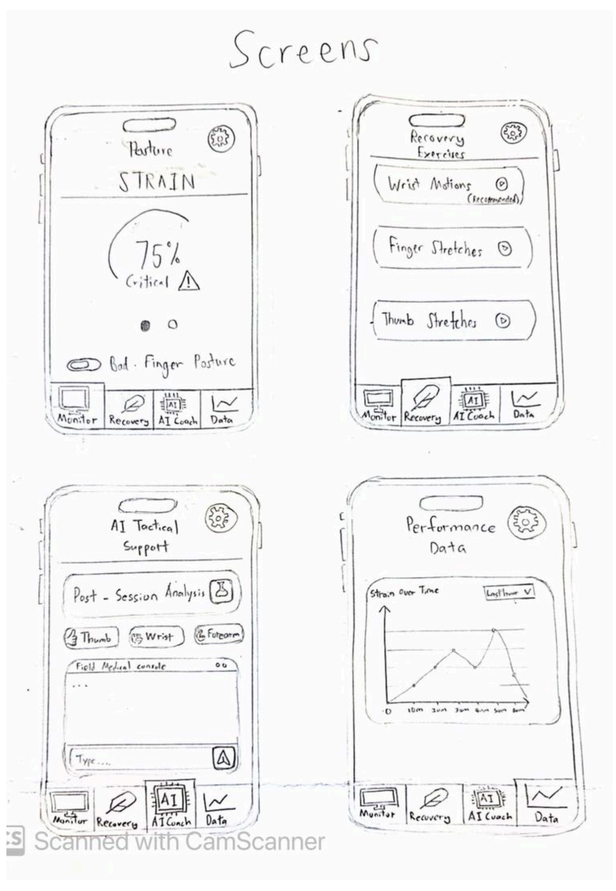
We found out...

Wrist strain is common from gaming

Need for real-time ergonomic support

Noted key recovery & prevention requirements

2. Initial Paper Prototype



3. Heuristic Evaluation

Checked the prototype using Nielsen's heuristics

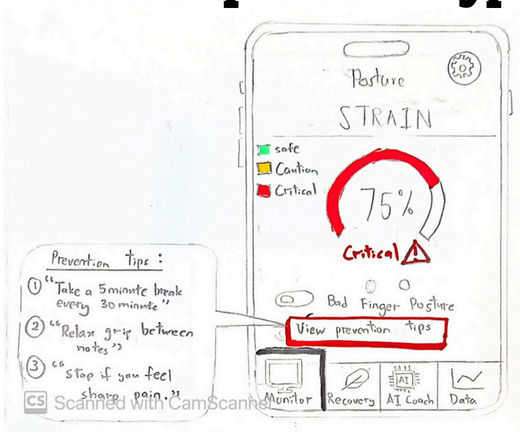
- Found unclear system status visibility
- Found missing back buttons & error messages

4. Usability Testing

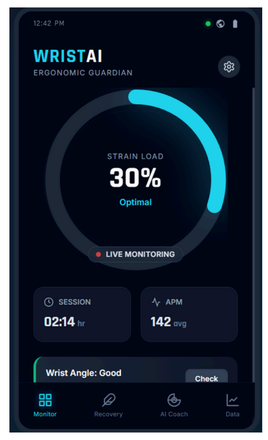
Conducted 3 live sessions with target users

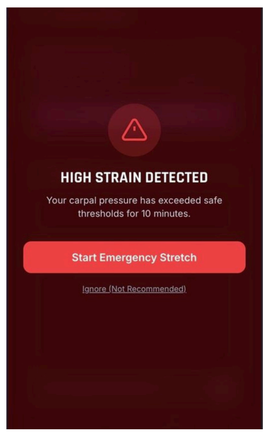
- Found recovery protocols highly valued
- Users requested cumulative strain bar & warm-up exercises

5. Final Paper Prototype



6. Digital Mockup





RESULTS

Clear navigation & easy-to-use interface

Real-time monitoring + AI guidance improves awareness

Cumulative strain visualization helps track wrist load

Ergonomic design **reduces strain** and **promotes long-term wrist health**

For healthier gaming and smarter ergonomics

SCAN HERE TO OUR WEBSITE:

SCAN HERE TO WATCH VIDEO:

DON'T JUST PLAY TO WIN. PLAY TO LAST.