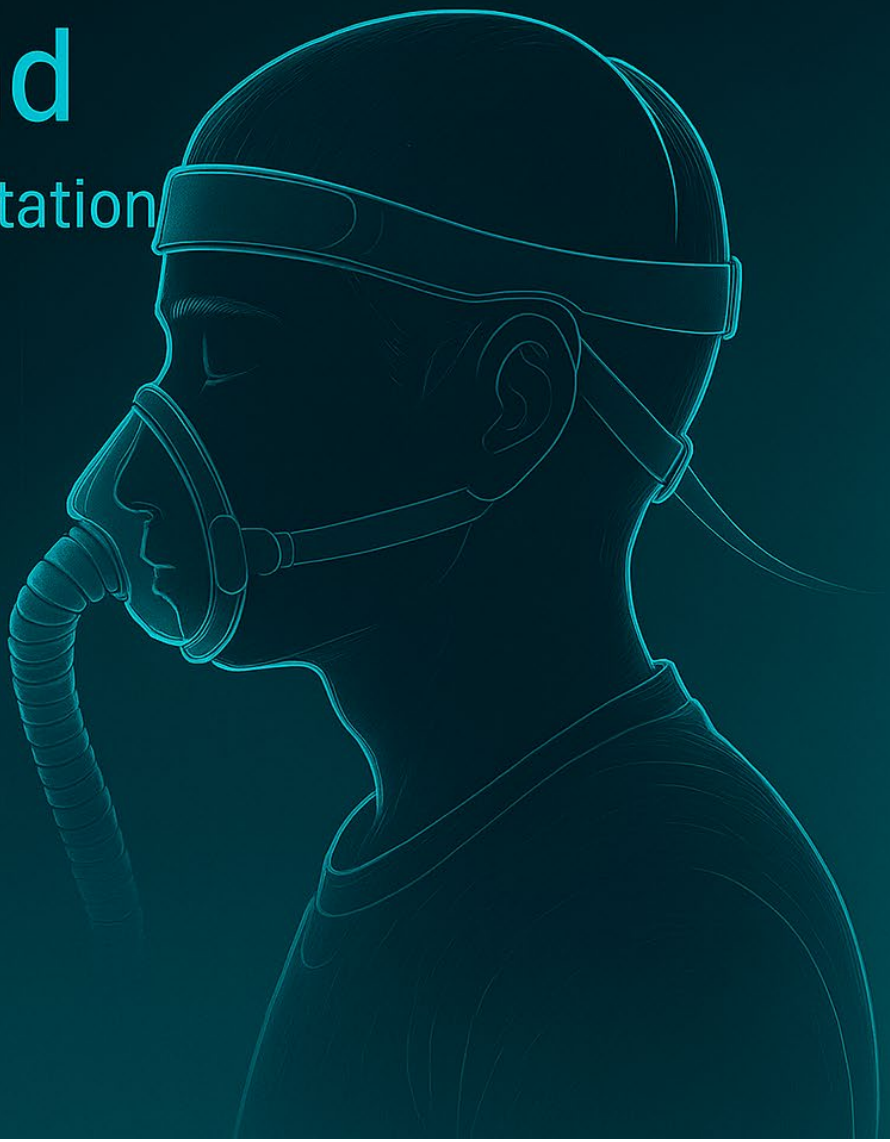
Future AirBand

A Futuristic Sleep Augmentation System for CPAP Users



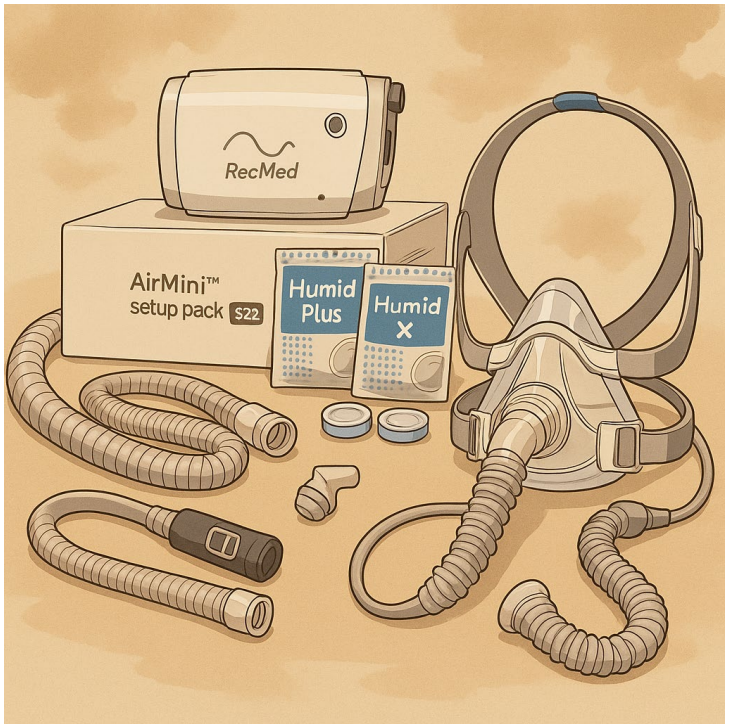
Bullimalinna Sot

MM665 – Touch Project

Initial Ideas

Traditional CPAP masks cause discomfort, break easily, restrict movement, and feel medical, reducing nightly adherence.

Question



Why build this ? Because it a huge market for people with sleep disorder

- Success = +2 hrs nightly use, 50% fewer complaints, higher comfort, higher retention.
- Cost more then most new phone and monthly transportation
- Most part are built with cheap plastic parts.
- Break or Damage = more capital add up to medical bills

Users

Interviewers

Truck drivers & remote workers both side sleepers, overweight users, anyone avoiding CPAP due to discomfort. Both also damage the CPAP and know it going to happen in the future.

Socheath T: Driver uses remote machine with CPAP on the road but damage often due to moving around

Jesses S: Work at home and damage due to weight and son call him snore like a bear.

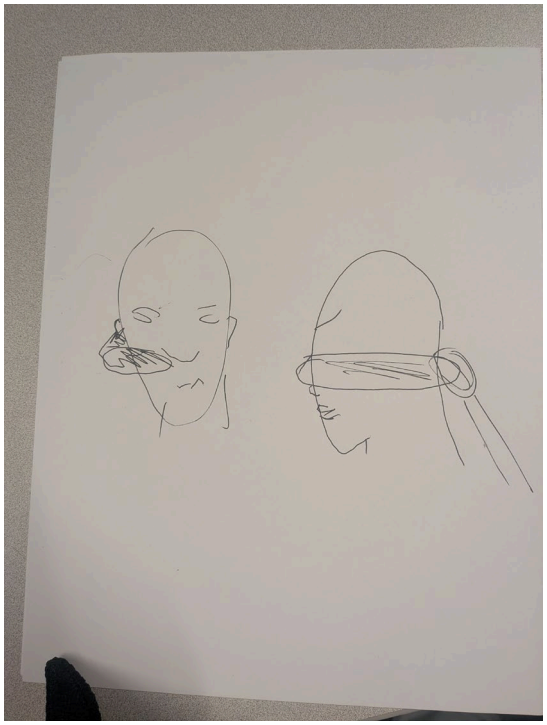
User Outcomes & Benefits (JTBD)

- JTBD: Sleep comfortably in any position without feeling restricted; breathe safely; feel less stigma.

How can we fix this ?

Solutions (intervention Design)

- AirBand: under-eye airflow bar, neck-routed tube, flexible band, break-resistant, comfort-tech aesthetic.
- I also draw this myself and build it with regular “Dollar Tree” tools by using a Snorkel to sync with a hair dryer.



Hypotheses

H1

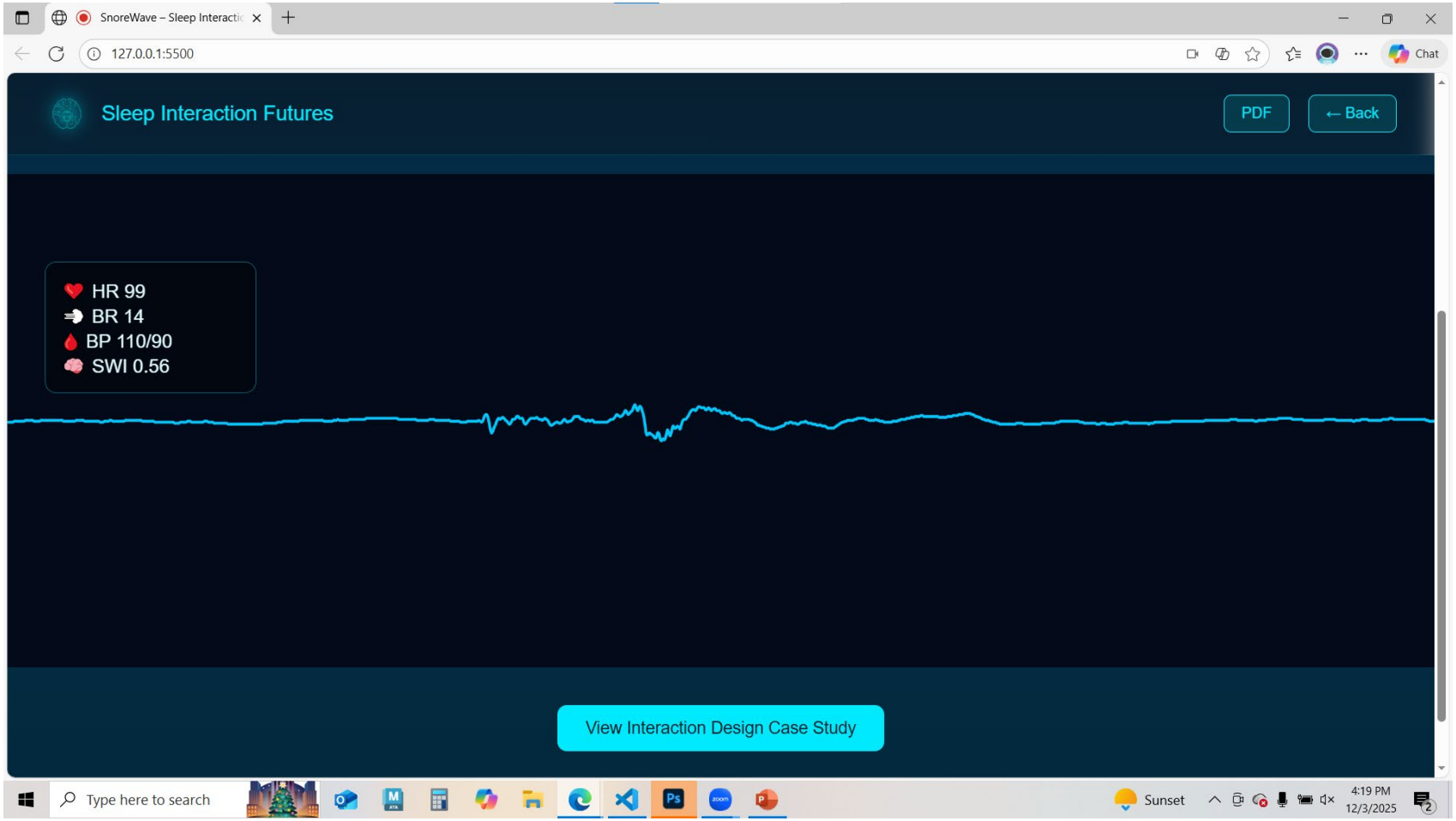
- Covering tube-pulling, breakage, aesthetic acceptance, airflow stability
- Sleep better and can move to the left or right
- Does not matter who you are, what you do, as long as you sleep well.

H2

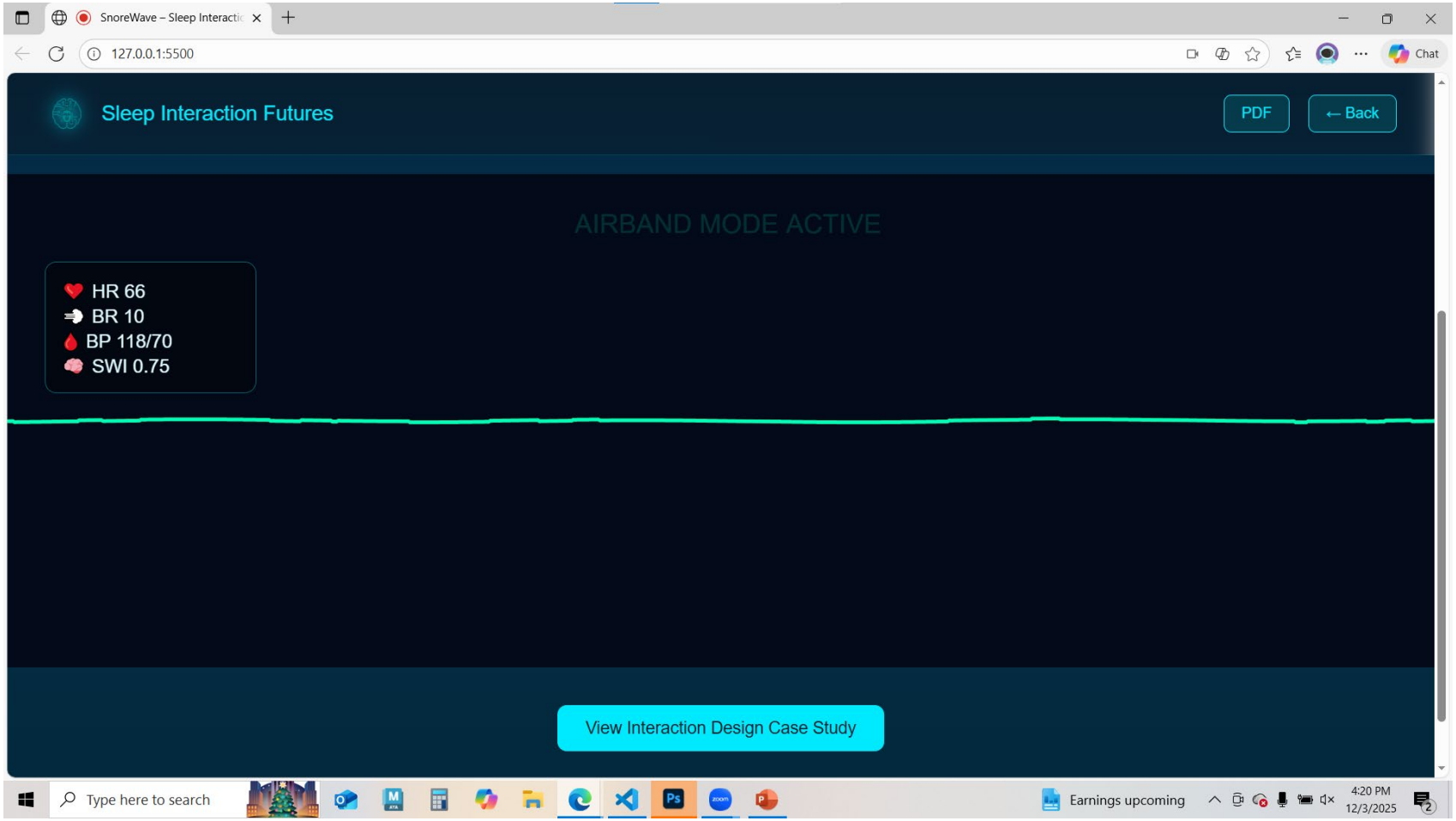
- This is the future. While showing a cool screen on the side by recording your brain wave.
- SLEEP BETTER = wake up better and enjoy life !

Development

(INTERACTIVE FUTURISTIC SLEEP SYSTEM)



AIRBAND MODE ACTIVE



Most Important Thing to Learn

- Riskiest assumption: airflow stability + band staying in place during movement.
- Better then what's in the market
- Save money
- Move as much as you want

Personal Testing Statement

In addition to interviewing CPAP users, I also underwent a full overnight sleep study and tested the airflow equipment myself due to my own health concerns. Experiencing the wires, sensors, and CPAP airflow firsthand allowed me to better understand the physical and emotional pressures users face. This personal participation strengthened the insights behind my prototype and ensured the design remained grounded in real, lived experience. This is before I use the machine at 10pm (this wires are for my brain + sleep wave)

How This Project Fits MM665 – Interaction Design & Interactive Art

This project combines embodied interaction, physical prototyping, speculative visualization, and auto-ethnographic research. By using my own body as part of the investigation, transforming real CPAP experiences into anime-style expressive visuals, and designing a touch-based wearable interface, this work reflects the core principles of Interaction Design & Interactive Art: human sensation, material exploration, storytelling, and designing for lived experience.

THANK YOU !