PULSY

THE AI ADVISOR FOR WEARABLE DEVICES

Get personalized, actionable insights inspired by health experts like Andrew Huberman



AGENDA

Who is this built for?

Why current solutions aren't cutting it?

3 Architecture Layout

4 Object Oriented Design

Lessons Learned + Future Improvements

WEARABLE DEVICES











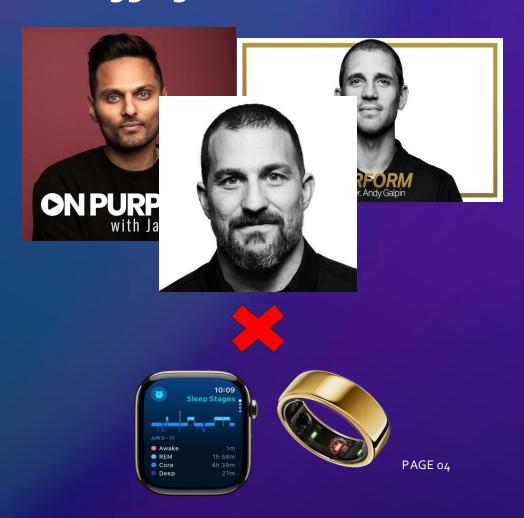
Apple Watch

WHY CURRENT SOLUTIONS AREN'T CUTTING IT

Difficult to Contextualize



Disaggregated Information



WHO IS THIS BUILT FOR?

Action – Based Users



Domain Expertise Actionable Insights Trusted Sources





Sleep Score Sleep Score Contributors Stress Scores Heart Rate Variability



Pulsy

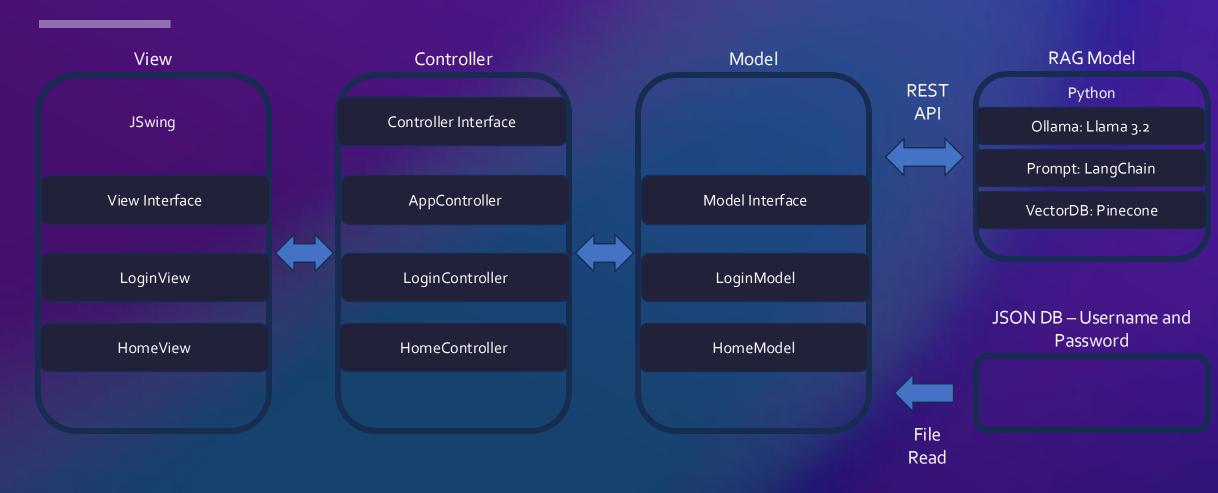
Summary of Latest Wearable Device Metrics

Explanation of potential contributors

Insights from Andrew Huberman + others

DEMO

APP LAYOUT





Oura Ring API

RAG

Wearable Device Data



HTTP - GET Request



Response

Query

RAG Framework

Prompting Framework: LangChain LLM Response

Context-Updated Prompt



Ollama: Llama 3.2

Runs LLMs on Local Machine





Vector DB

Semantic Search Results



Transcript Documents

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OOP PRINCIPLES

- MVC
- Inheritance
- Abstraction

Wearables Interface

- + getDeviceName: String
- + getDeviceID: String
- + setDeviceID: void
- + getDeviceDesc: String
- + setDeviceDesc: void
- +getDeviceIcon: String
- + getAPIKey: String + setAPIKey: void
- + getMetricDesc: String

Abstract Wearables

- + getDeviceID: String
- + setDeviceID: void
- + getDeviceDesc: String
- + setDeviceDesc: void
- +getDeviceIcon: String
- + getAPIKey: String
- + setAPIKey: void

OuraRing

- -initializeMetricInfo: void-metricDesc: Map<Str, Str>
- -name: DeviceName
- + getDeviceName: String
- + getDeviceIcon: String
- + getMetricDesc: String



Apple Watch

- -initializeMetricInfo: void
- -metricDesc: Map<Str, Str>
- -name: DeviceName
- + getDeviceName: String
- + getDeviceIcon: String
- + getMetricDesc: String



Etc.



LESSONS LEARNED

1

Planning: Always Draw out the application architecture before starting to code

2

Work "Under the Hood" - Simply plugging in an open-source LLM is not sufficient for providing a quality experience

3

Modularity: Think about modularity of different architectural blocks – how can I ensure that if I have a new version or new medium – I don't need to change anything else

FUTURE EXTENSIONS

Unfinished Dev Work as of 4/21

- User Profile Set/Edit
 Page
- 2. Device List add page
- Passing of user profile into the context query

- Build a more advanced language model
- Shift the UI to web based for a more modern user experience
- Build out integrations with ALL the metrics of the Oura Ring + Apple Watch

REFERENCES + CITATIONS

Oura Ring

- https://cloud.ouraring.com/v2/docs#section/Overview
- https://ouraring.com/how-it-works

RAG

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- https://python.langchain.com/docs/integrations/chat/ollama/
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Thank you!