



Personalized Health Navigation & Conversational Health Agents

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SC 42 – Artificial Intelligence



Personalized Health Navigation

Consider:

What if I could use the same cybernetic systems technologies that I use to find that restaurant in a nearby town ...

To navigate to my own personal health & wellness & healthcare goals?!

Health is more than Healthcare



Personalized Health Navigation (PHN)

*Enables & empowers **individuals**
to intentionally pursue their
own **health** and **wellness journey**...*

*By utilizing intelligent navigational technologies,
integrating comprehensive information
from their daily lives &
factoring in all relevant knowledge*

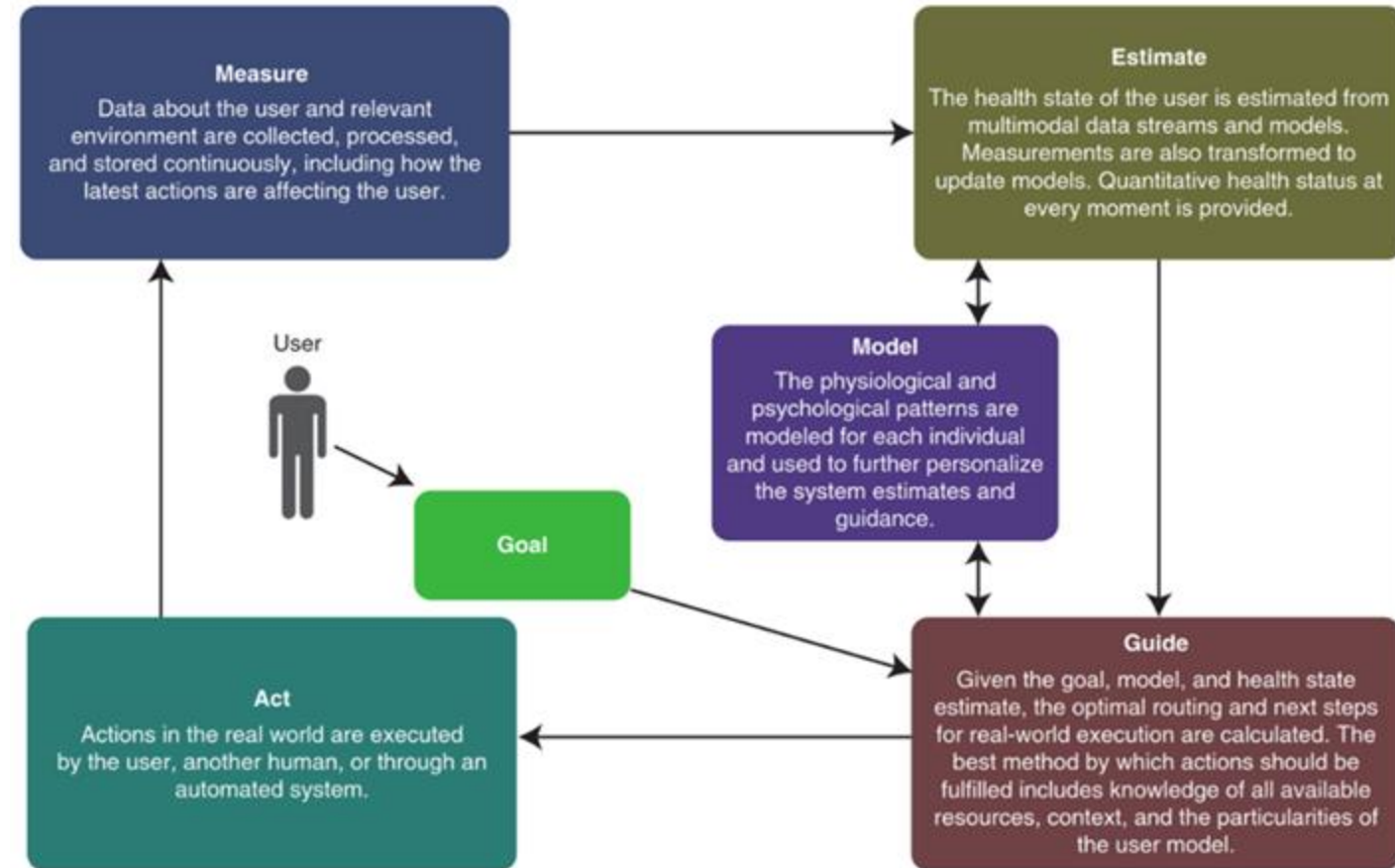
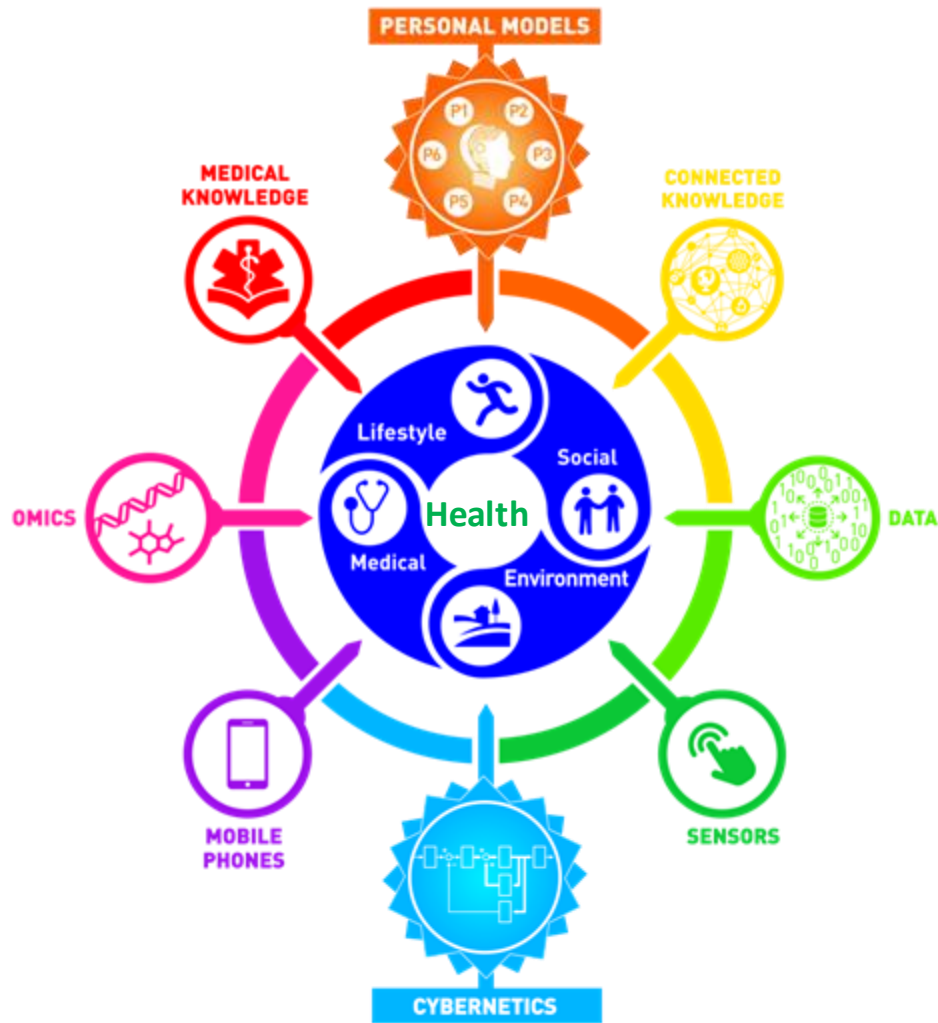
sources

*To personalize, optimize and guide
**self-directed health, wellness &
healthcare** activities &*

*To facilitate coordination with
family, community, caregivers &
healthcare teams*

All to attain their desired goals.

Personalized Health Navigation



Sharon sorting mom's medications ...



Hmmmm ... “Betty – should I tell the doctor that mom has lost 10 pounds since that change in her water pill a few weeks ago?”



Helping Sharon & Margaret ...

How hard can it be?

- ❑ To enable Sharon ...
- ❑ To interact – *conversationally* –
 - ✓ With *trusted* experts ...
 - ✓ That know *all* about her mom +
 - ✓ Coordinate with care providers ...
- ❑ To be *empowered* to help ...
- ❑ Margaret live as healthy & well as possible!





Open Conversational Health Agents

Abbasian, M., Azimi, I., Rahmani, A.M. and Jain, R., 2023. Conversational Health Agents: A Personalized LLM-Powered Agent Framework. arXiv preprint arXiv:2310.02374.

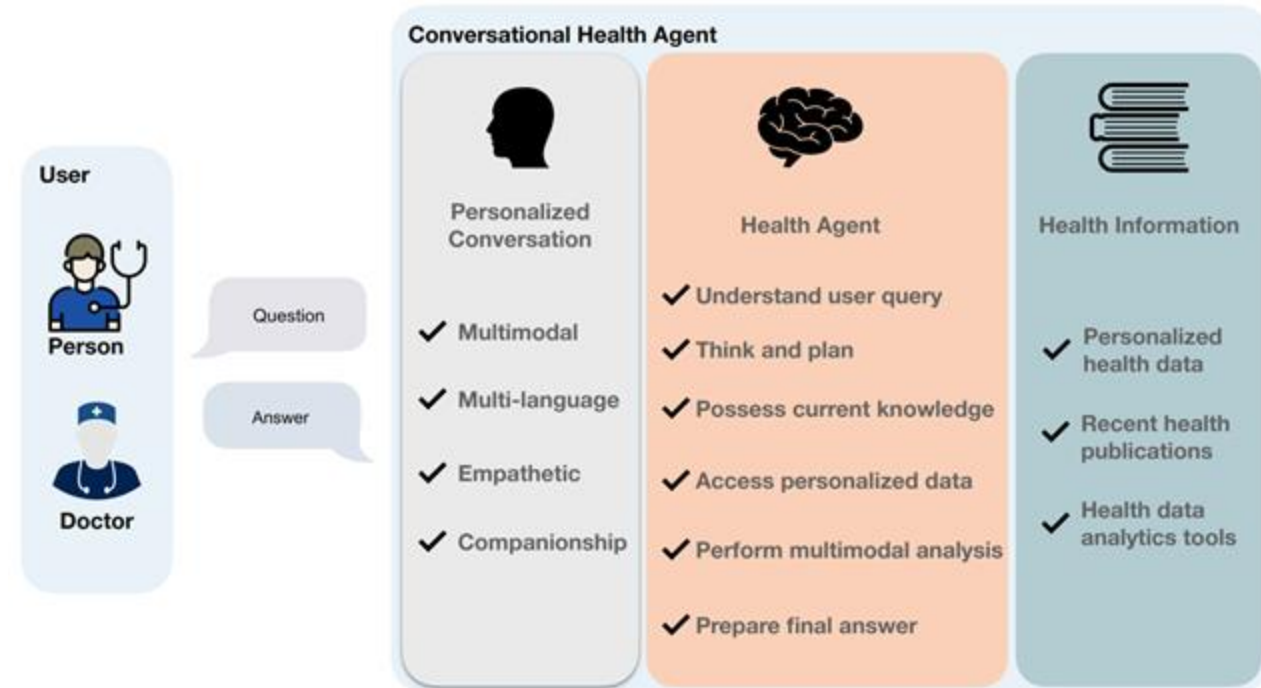
<https://github.com/Institute4FutureHealth/CHA>

Conversational Health Agents

Interactive systems providing healthcare services like assistance.

Current Limitations:

- Focus on conversational aspects
- Inability to fully personalize conversations
- Limited data analysis (multimodal data, e.g., text, voice, images).

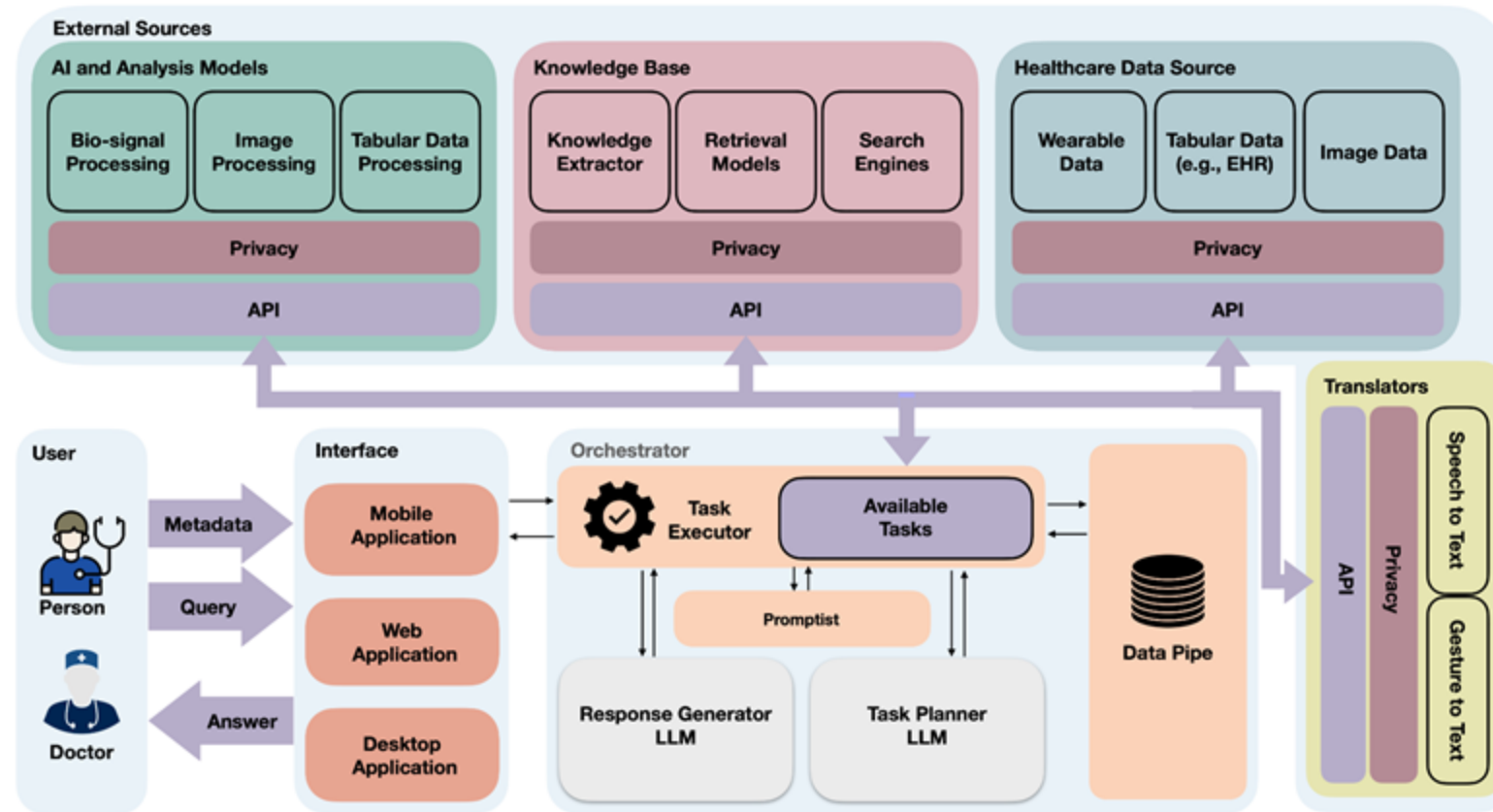


PHN Conversational Health Agent

openCHA (Conversational Health Agents)

- Integration with external sources
- Orchestrator module to plan and interact with external sources
- Response Generator

openCHA Framework



Demonstrations and Contribution to the Community

Real-World Demonstrations:

- Diet recommendation, Wearable-based stress monitoring, etc.
- <https://www.opencha.com/>

Community Engagement:

- openCHA released on GitHub as an open-source project
- Encourages community collaboration
- Potential for widespread impact on healthcare technology development
- <https://github.com/Institute4FutureHealth/CHA>

Thank you

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