

Content Curation for Consumer Health Search: Search and Misinformation Detection

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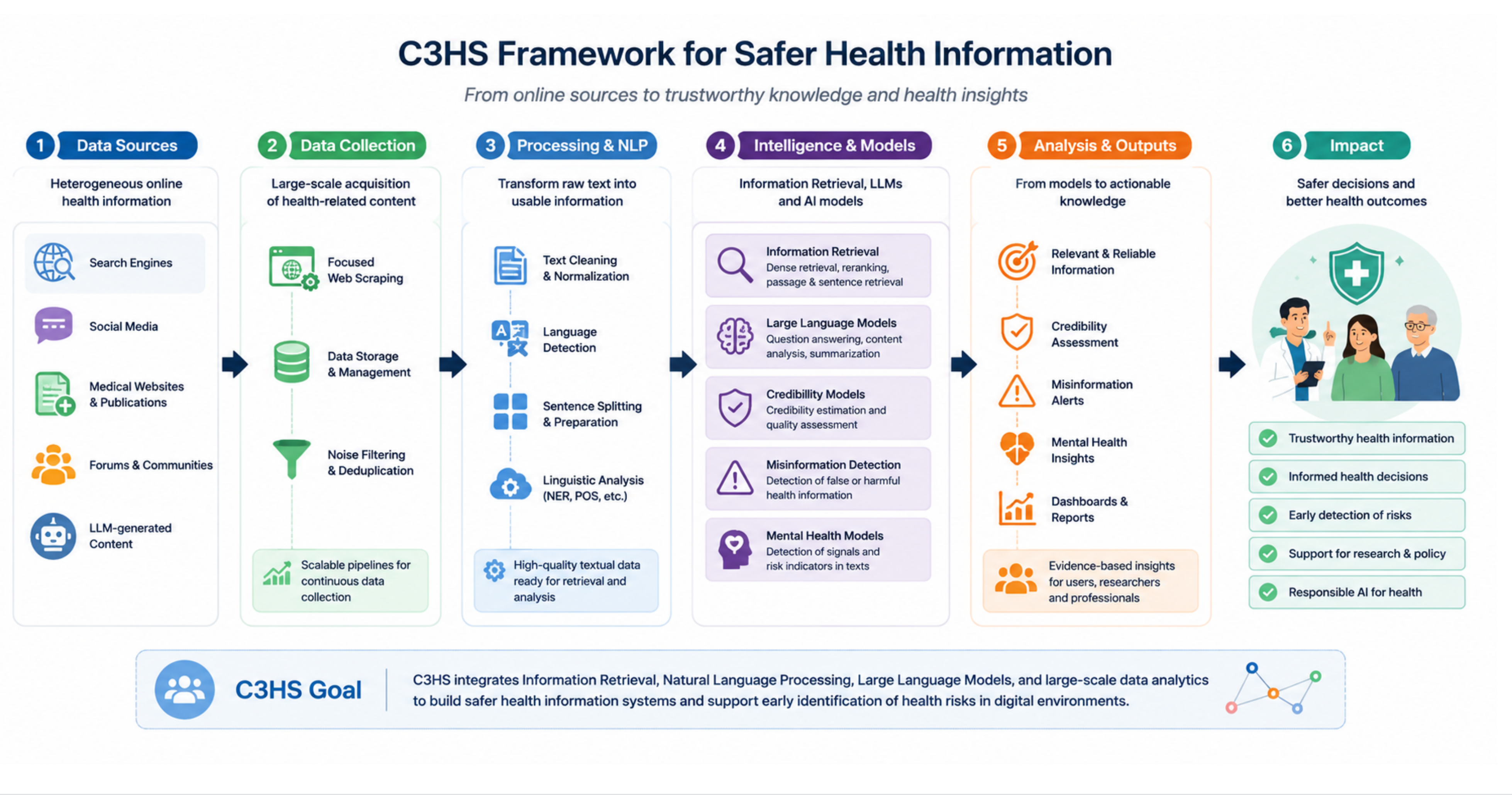
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1. Motivation

Millions of people turn to search engines, social media, and increasingly LLMs for medical advice. While these tools offer instant access to health information, they also expose users to misinformation and unreliable, potentially harmful recommendations. At the same time, **online behavior** offers valuable signals for **early detection of mental health risks**, enabling large-scale **computational health monitoring**. The C3HS project (PID2022-137061OB-C22) combines Information Retrieval, NLP, AI, and data analytics to improve the reliability and safety of online health information while advancing mental health analysis and misinformation detection.

3. Project Proposal



5. C3HS Research Framework

C3HS integrates data acquisition, Natural Language Processing, Information Retrieval, and Artificial Intelligence for trustworthy health information analysis.

Work Package Overview

- WP1 — Data Collection and Evaluation:** Develop experimental collections, crawling strategies, and evaluation methodologies for consumer health search.
- WP2 — Health Search Technologies:** Develop retrieval models that identify the most relevant and reliable health information.
- WP3 — Credibility and Misinformation:** Develop computational models to estimate the credibility of online information and detect misinformation.
- WP4 — Large-scale Processing:** Create scalable infrastructures capable of continuously collecting and processing online health information.
- WP5 — Personalization:** Develop recommendation systems adapted to user profiles and health needs.

2. Highlights

- Massive online health information
- Health misinformation
- AI-powered search systems
- Mental health monitoring

4. Objectives

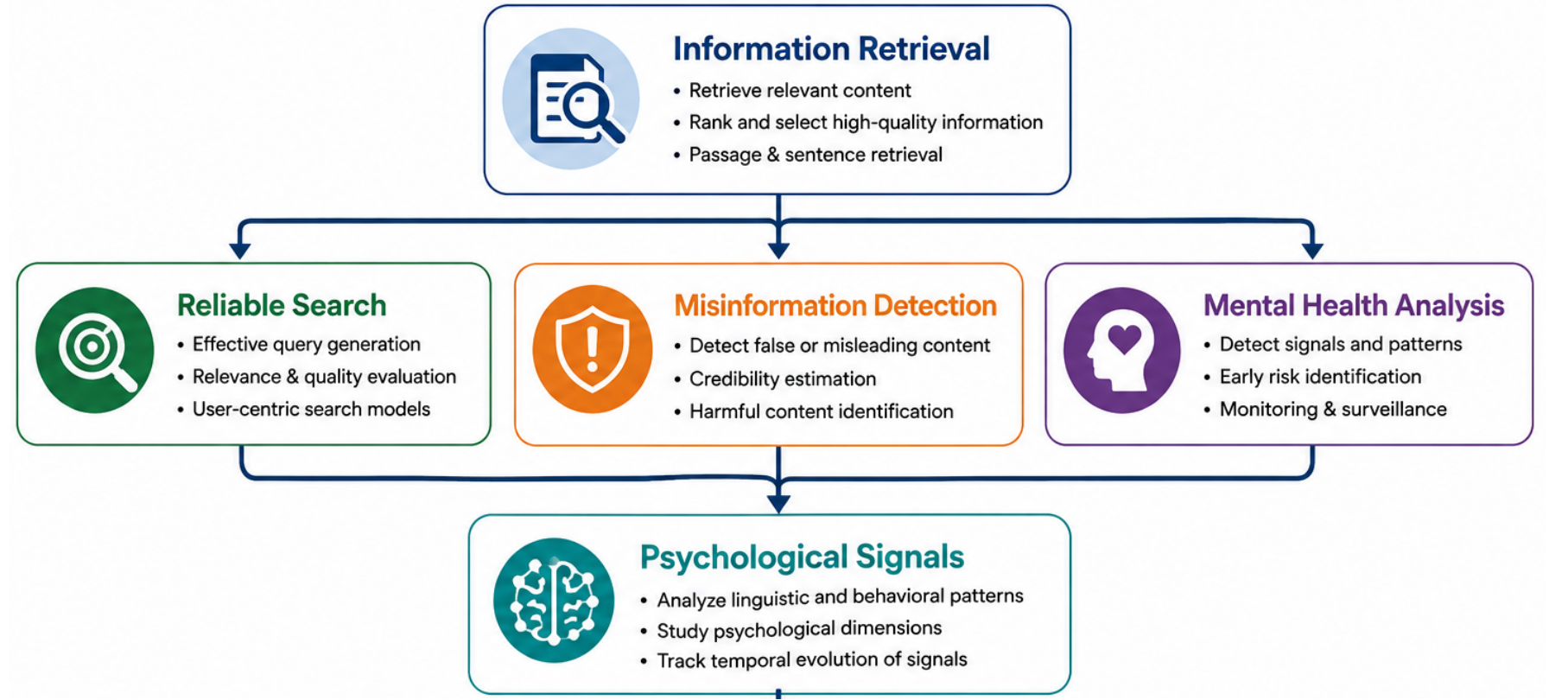
- Improve the reliability of consumer health search systems.
- Develop computational methods for detecting health misinformation.
- Estimate the credibility of online medical information.
- Evaluate search engines and conversational AI systems.
- Detect early indicators of mental health risks from social media.

Moving beyond relevance:

C3HS promotes a new generation of health information systems that jointly optimize relevance, credibility, safety, and early risk detection, providing more trustworthy support for users and healthcare applications.

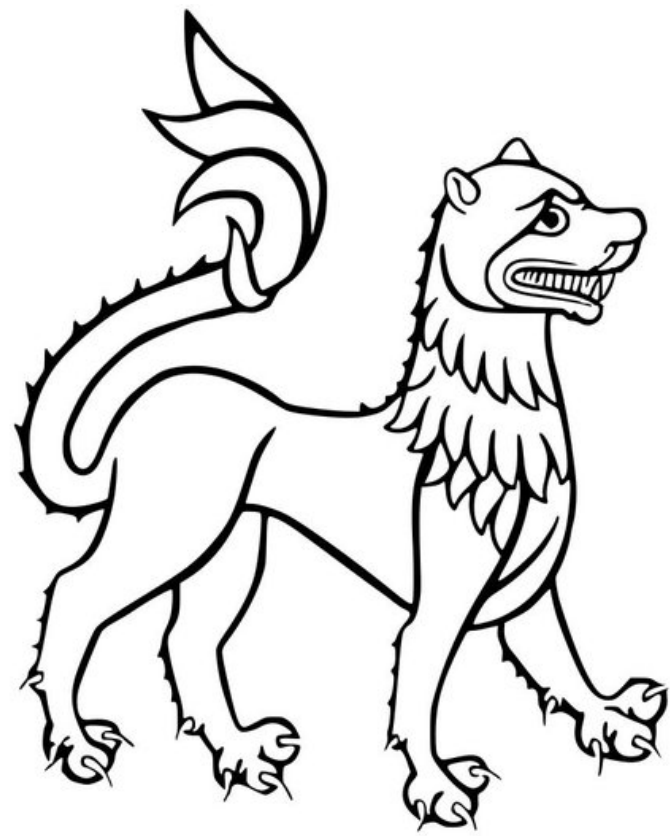
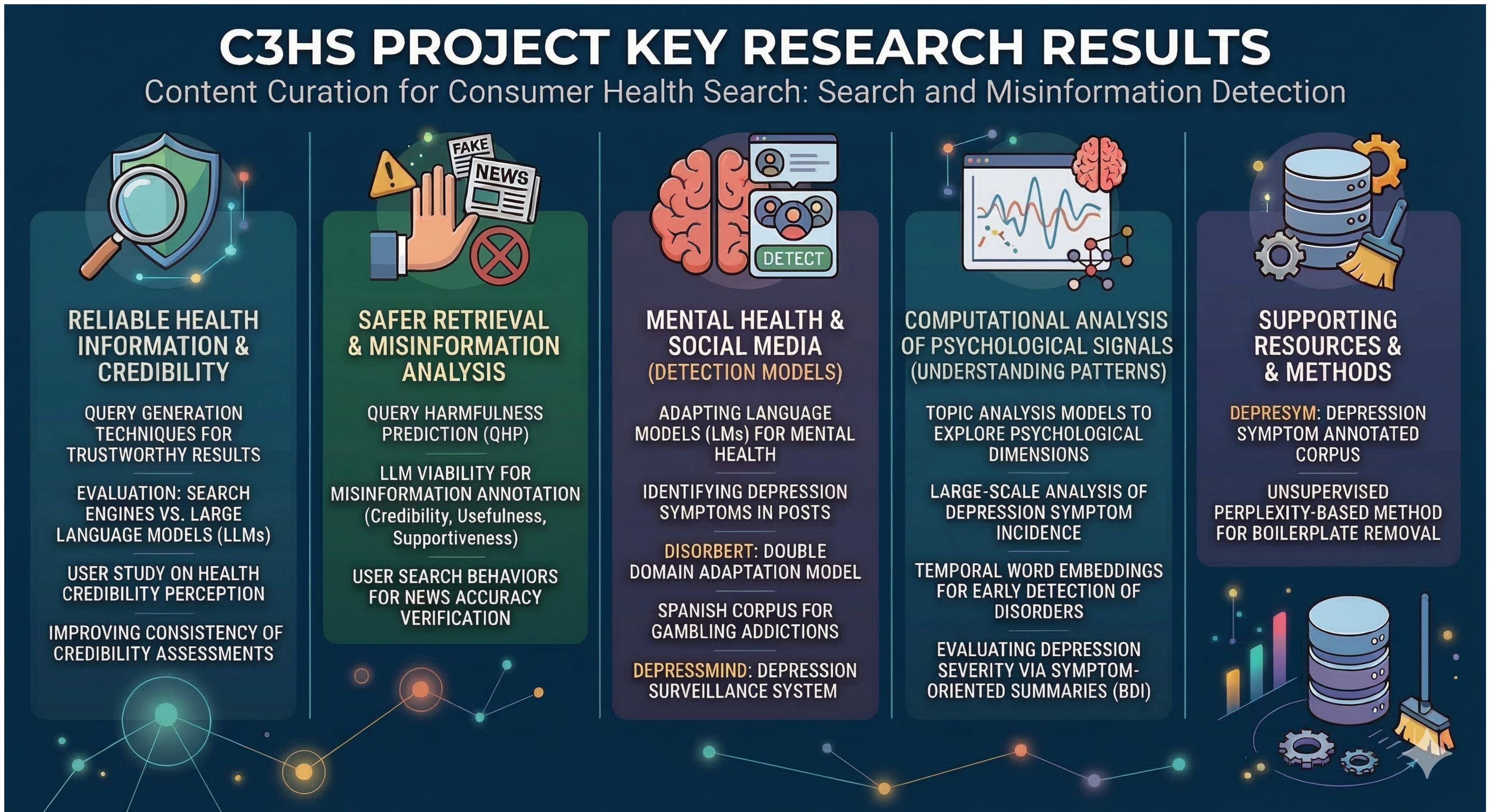
6. Research Lines

Our research has focused on four complementary research directions:



Together, these research lines provide the foundations for safer, more reliable, and user-centered health information systems.

7. Main Scientific Contributions



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