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Medical Records Stolen As 1 Million Patients Hit By Healthcare Hack

By [Davey Winder](#), Senior Contributor. Davey Winder is a veteran cybersecurity professional with over 20 years of experience in the field.

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Published Feb 02, 2025, 04:33am EST

Hacker behind Star Health breach claims three executives

The hacker behind Star Health

EXCLUSIVE

Hackers May Have Stolen Patient Data from India's Largest Hospital Chain

The leaked files included Aadhaar, PAN, passports, vaccination reports, patient medical records, resumes of job applicants, payment gateway credentials, and backend source code.

Massive Data Breach at Star Health: Shakira's medical record leak sparks investigation; Customer Medical Records Sold on Peru; clinic faces potential fines of \$430,000 via Telegram

AFP / Updated: Feb 19, 2025, 09:09 IST



by Samiksha Jain — September 24, 2024

in Cyber News, Dark Web News, Data Breach News, Firewall Daily

Where patients are deprived of proper medical reports

Anushka Juliet / Jul 30, 2025, 03:54 IST

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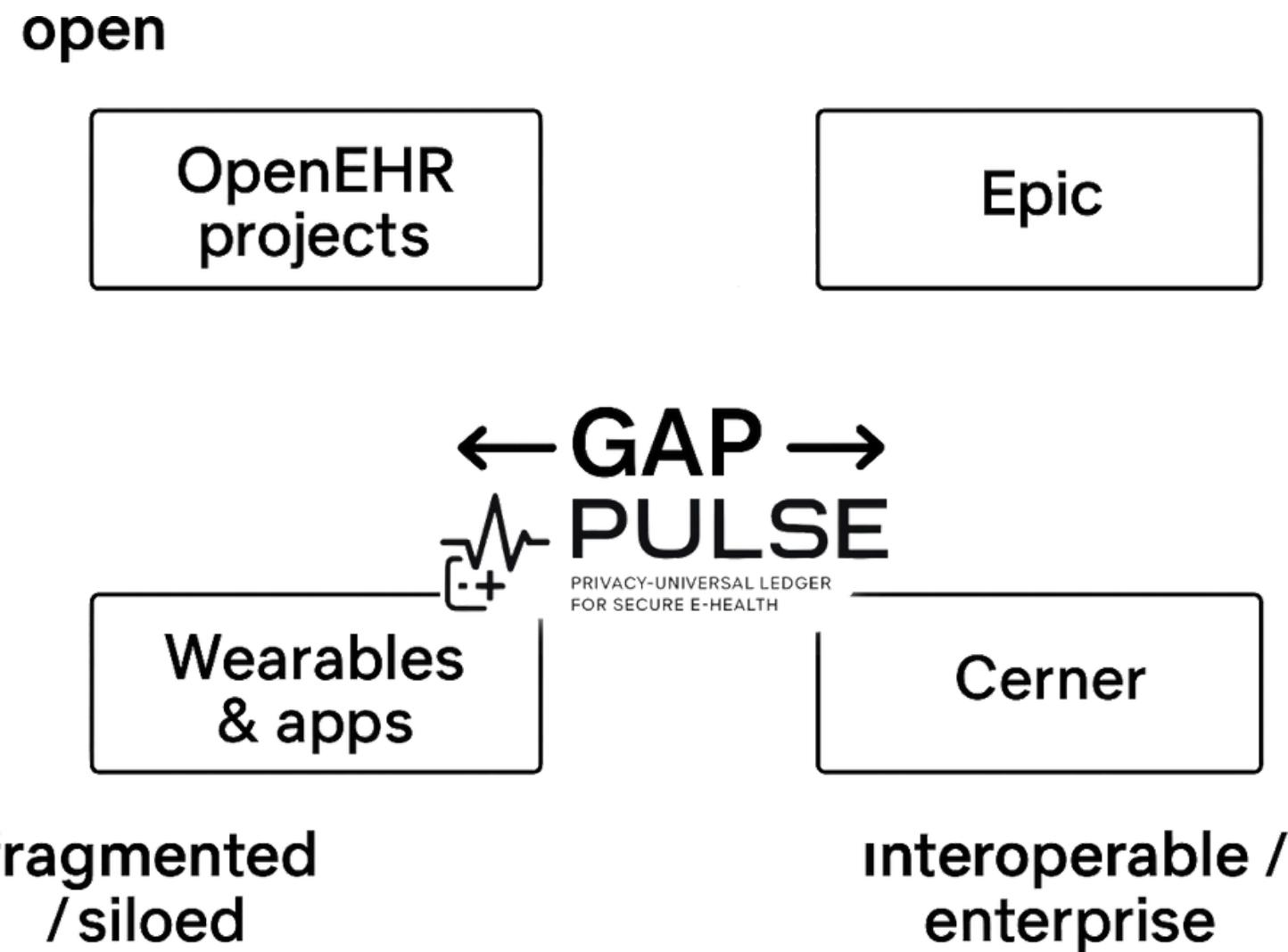
Coimbatore: Jayshree, 25, a city resident who recently gave birth to a baby at the Coimbatore Medical College and Hospital (CMCH), now visits the urban primary health centre (UPHC) at Seeranaickenpalayam for routine check-up. She doesn't have a printed test report in her file, as she received only handwritten reports from both CMCH and the UPHC. And that's the drawback of govt healthcare centres, she says.

private doctors, details provided by govt hospitals are insufficient. If hospitals just mention it in writing and don't attach the report. In e units and their meanings, enabling patients to have a basic tion. At CMCH, blank OP papers are issued. Hence, chances of them y put it, your OP paper might end up with another patient."

THE PAIN

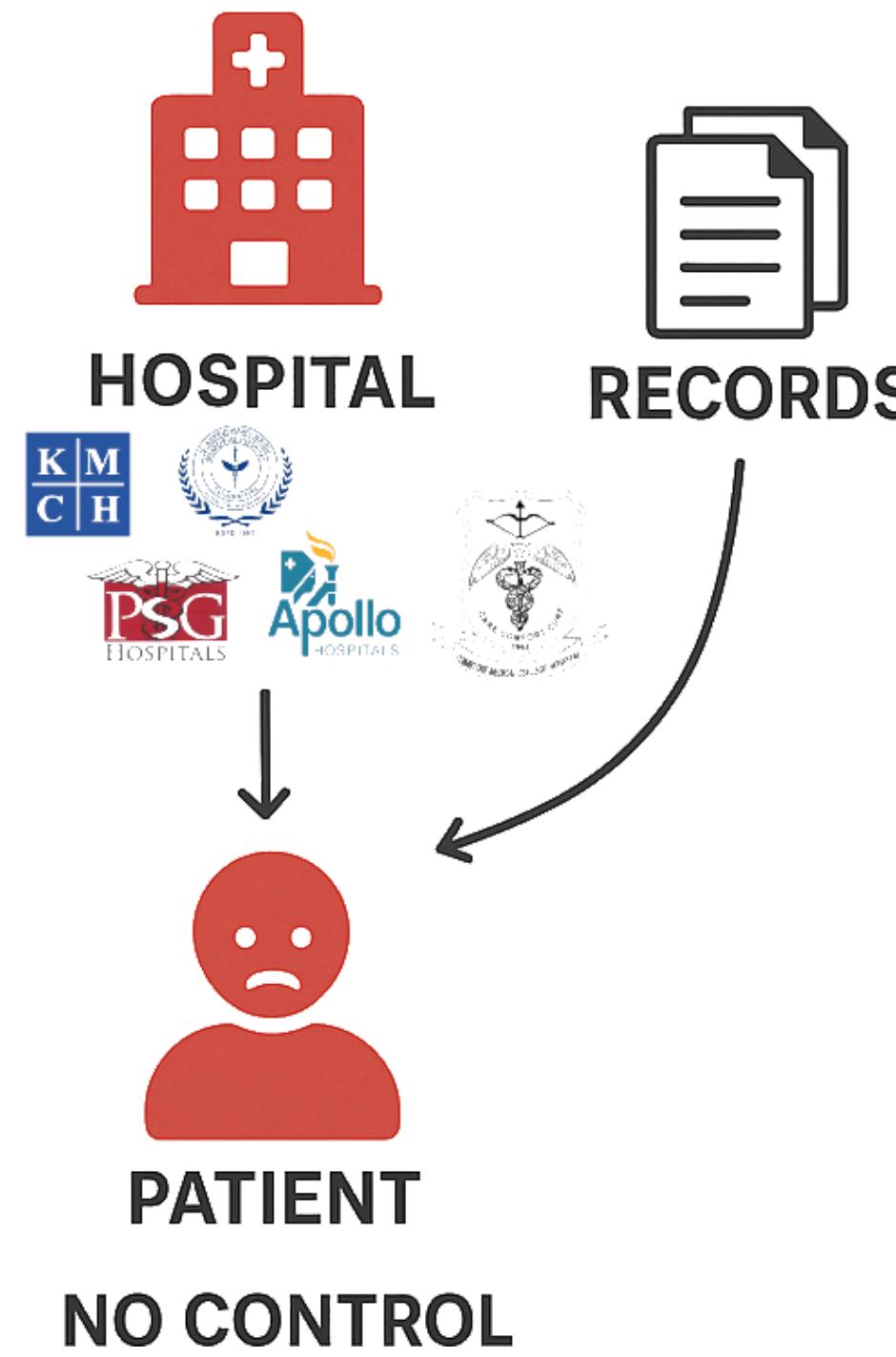
- fragmented health data = siloed, insecure, hard to trust
- patients lack control over who accesses + monetizes their data
- verification is slow, centralized, and privacy-leaking
- ai in healthcare lacks transparency, trust & contextual explainability

THE GAP



THE FIX - IMPACT

TODAY



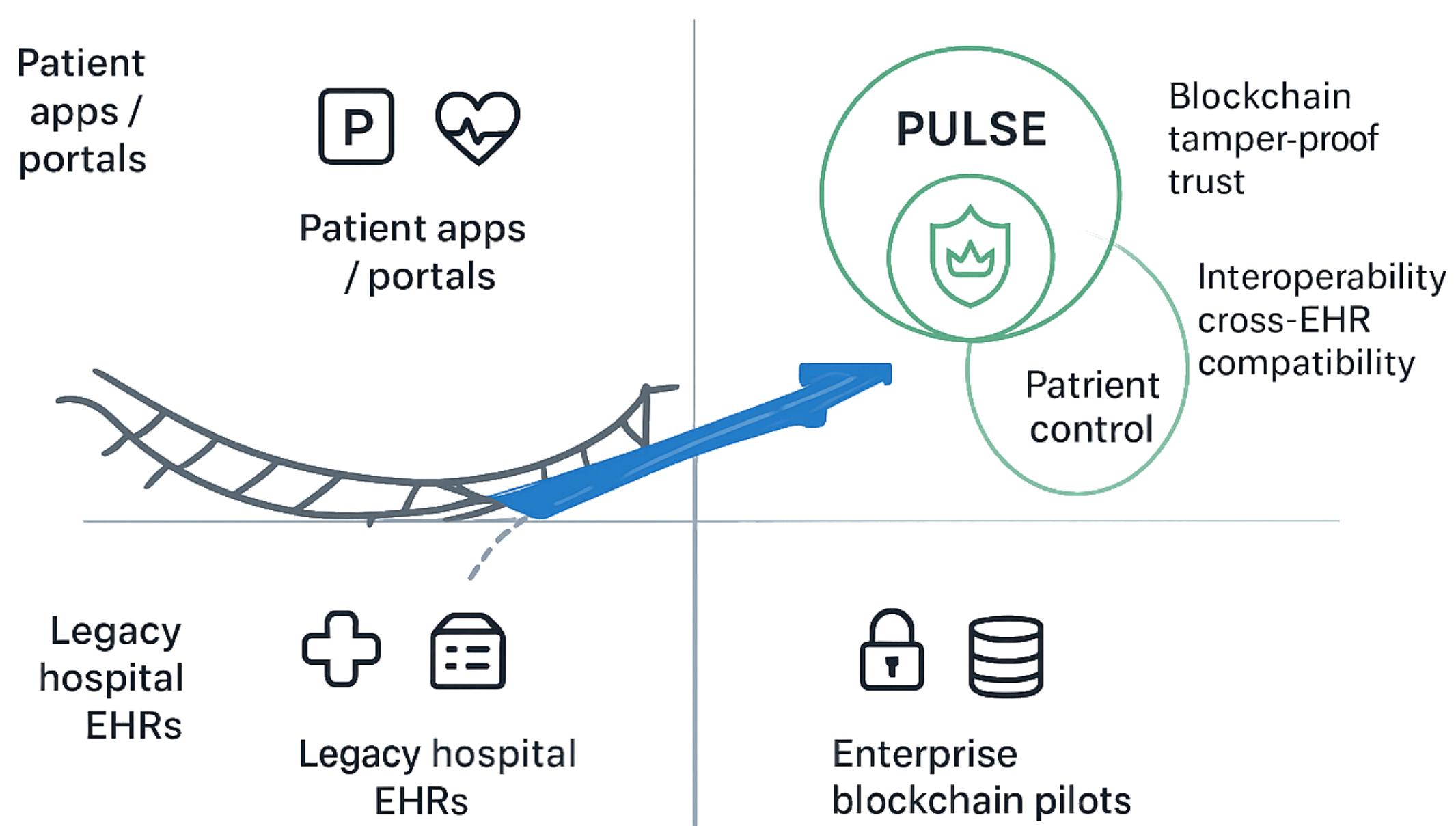
WITH PULSE

PRIVACY-UNIVERSAL LEDGER
FOR SECURE E-HEALTH

**DATA FLOWS
WHEN PATIENT APPROVES**

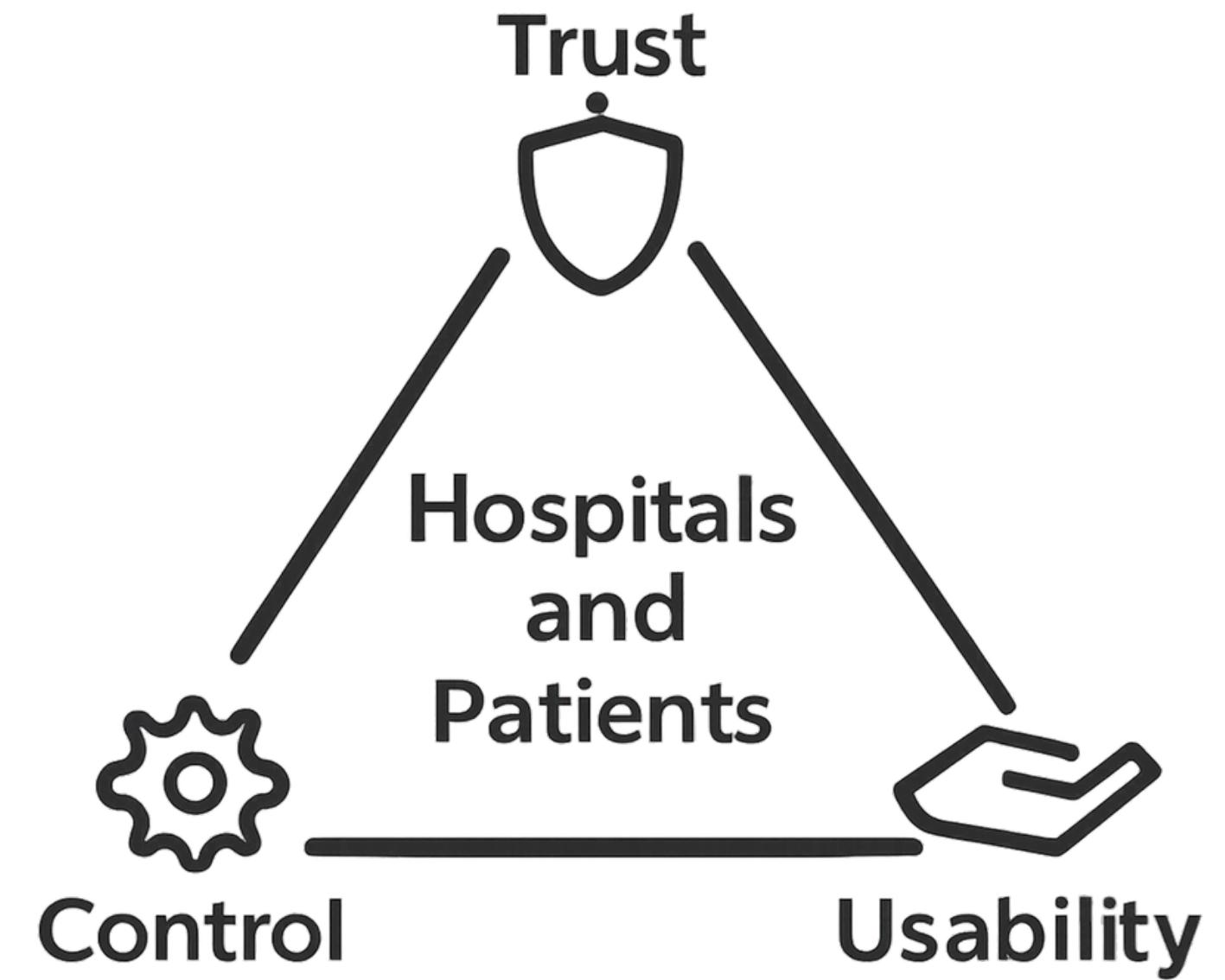


THE FIX - MARKET GAP



bridges the gap - turning hospital owned silos into patient owned interoperable health records

THE FIX - IMPACT

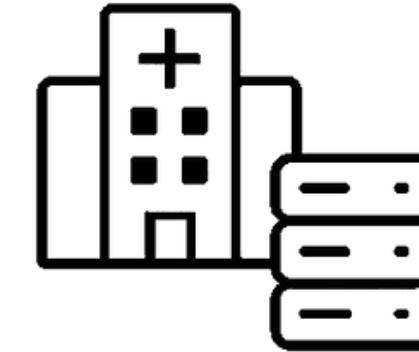


EASE OF ADOPTION



Patients (senior citizens)

- One dashboard, simple summaries
- Emergency access in one click
- Feels like the ‘health booklet’ they already use, just smarter



Hospitals

- Works as a layer below existing EHR/EMR
- No need to replace current systems
- Adds decentralization + patient control with zero switching cost

THE IMPACT



RECORD TRANSFERS
DAYs → SECONDS



DUPLICATION OF TESTS
-90%



FRAUDULENT CLAIMS
-80%



ADMIN OVERHEAD
-70%



THE CROWN IS BACK
ON THE PATIENT'S HEAD:
THEIR RECORDS, THEIR
CONTROL, THEIR CHOICE

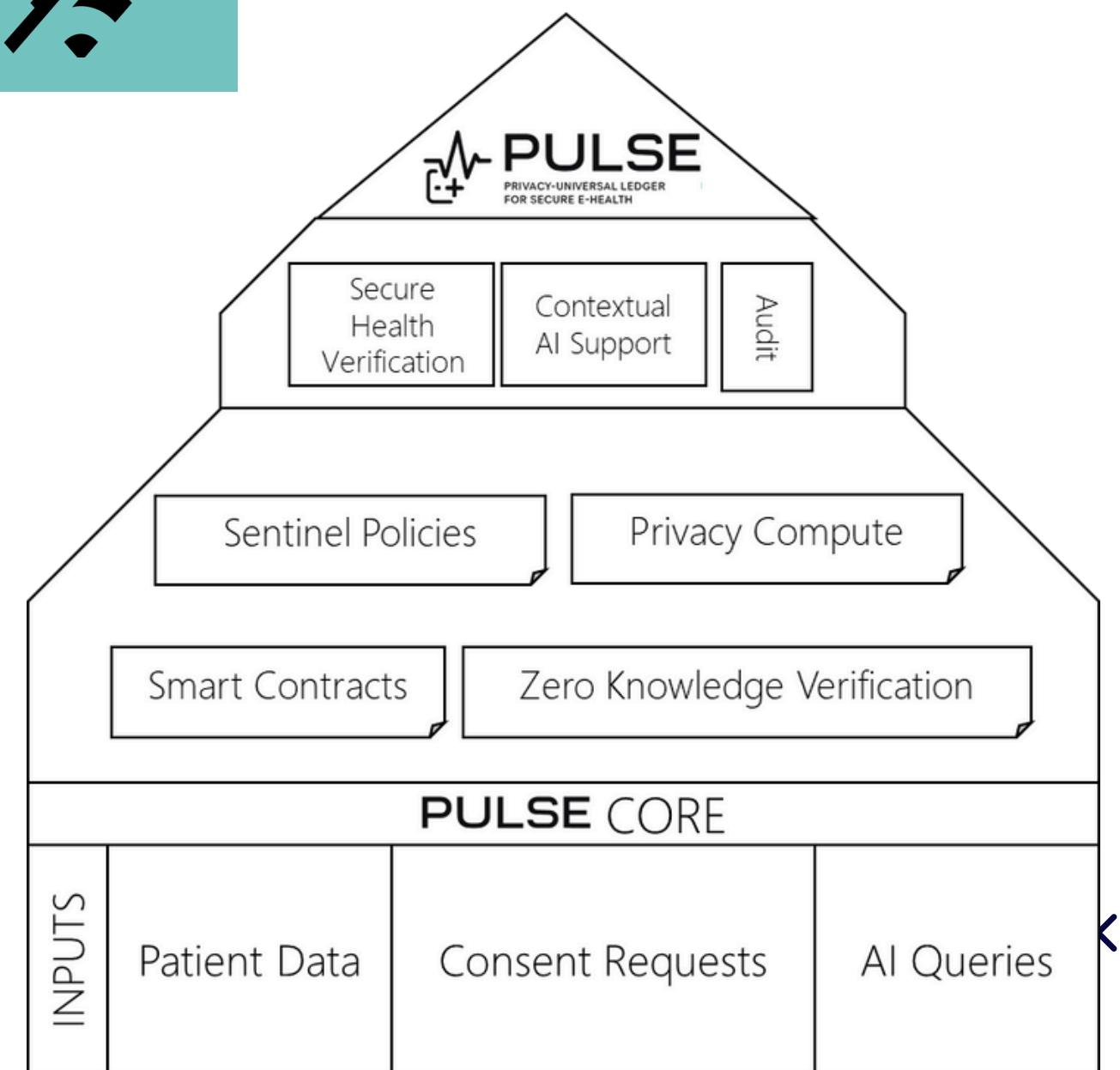
OUR APPROACH

- pulse → blockchain-backed trust fabric for health data
- smart contracts → consent mgmt, access control, payments
- zero-knowledge proofs → privacy-preserving verification
- on-device ai → contextual q&a + realtime security agent
- sentinel → policies + delegation for compliance and audit
- privacy-preserving compute → enable secure insights w/o raw data

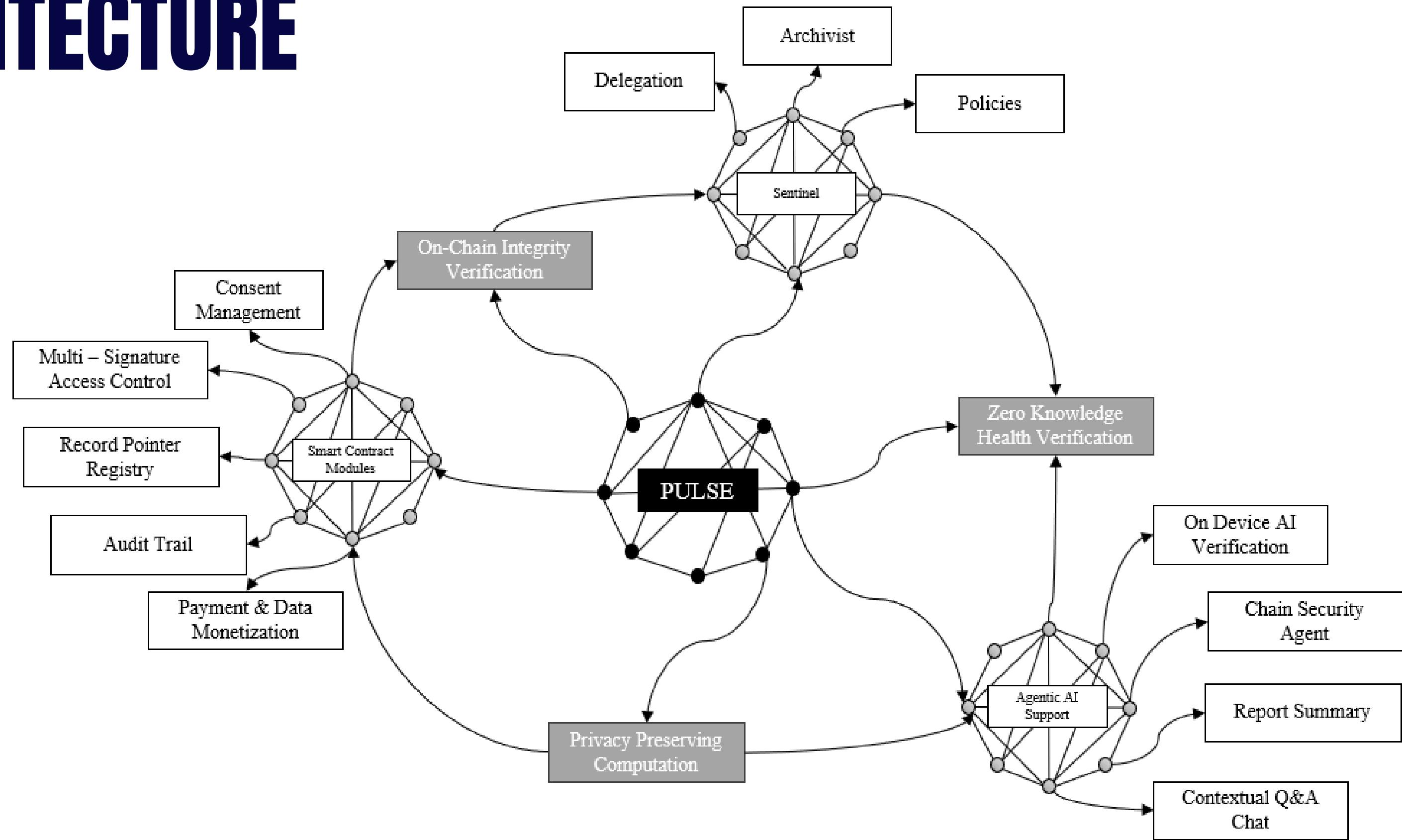
THE USP



Offline Access



ARCHITECTURE



PROGRESS TILL NOW

- FRONTEND → <https://hdm6jw5l-5173.inc1.devtunnels.ms/health-dashboard-overview>
- BLOCKCHAIN IMPLEMENTATION → <https://archbtw.tryethernal.com/overview>

TECH STACK

BLOCKCHAIN LAYER

-  **Ethereum**
Public blockchain for immutable record logging
-  **Solidity**
Smart contract programming
-  **Web3.js / Ethers.js**
Blockchain communication

SMART CONTRACT MANAGEMENT

-  **Truffle**
Development, testing, and deployment
-  **Ganache**
Local Ethereum testing environment
-  **MetaMask**
Patient wallet for signing consents

STORAGE & RETRIEVAL LAYER

-  **IPFS**
Decentralized, tamper-proof storage
-  **Filecoin**
Optional long-term decentralized backup

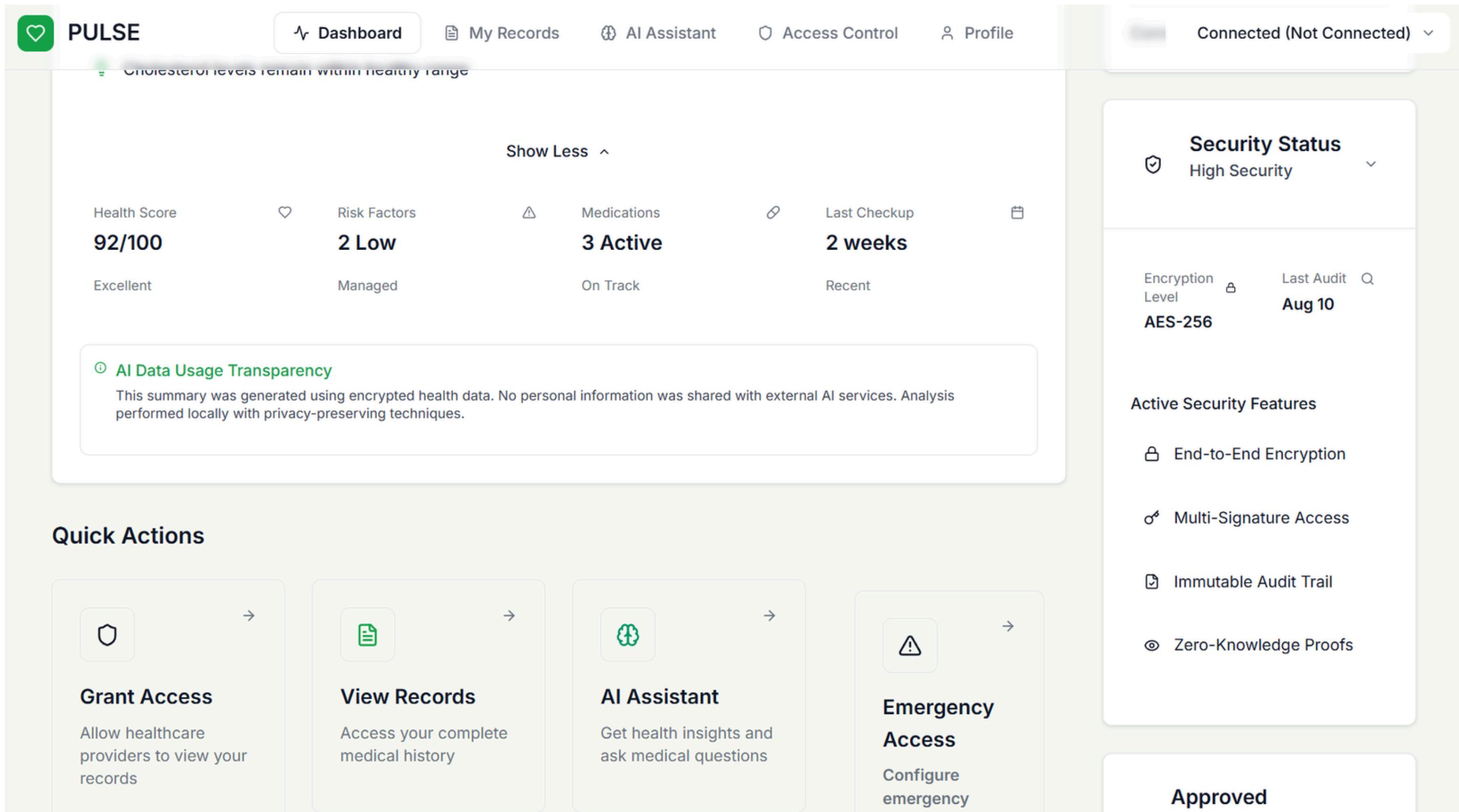
API & BACKEND LAYER

-  **Python + FastAPI**
-  **Node.js + Express.js**
REST API & backend framework
-  **Hugging Face Transformers**

WHAT MAKES US STAND OUT ?

- True Patient Control: Encryption keys, permissions remain entirely with the patient and accessible offline, anywhere, anytime.
- Borderless Access: Instant, secure sharing of records anywhere in the world.
- System-Agnostic: Works across all EHR platforms without costly integrations.
- Zero-Trust by Design: Multi-signature decryption and blockchain audit trails prevent misuse.
- AI-Augmented Care: Summarized, context-rich insights replace overwhelming raw data.
- Fraud & Tamper Proof: Immutable records eliminate alteration risks.

UI DESIGN



PULSE

Dashboard My Records AI Assistant Access Control Profile Connected (Not Connected)

Cholesterol levels remain within healthy range

Health Score: **92/100** (Excellent) Risk Factors: **2 Low** (Managed) Medications: **3 Active** (On Track) Last Checkup: **2 weeks** (Recent)

Show Less ^

AI Data Usage Transparency: This summary was generated using encrypted health data. No personal information was shared with external AI services. Analysis performed locally with privacy-preserving techniques.

Quick Actions:

- Grant Access**: Allow healthcare providers to view your records
- View Records**: Access your complete medical history
- AI Assistant**: Get health insights and ask medical questions
- Emergency Access**: Configure emergency

Security Status: High Security

Encryption Level: AES-256 Last Audit: Aug 10

Active Security Features:

- End-to-End Encryption
- Multi-Signature Access
- Immutable Audit Trail
- Zero-Knowledge Proofs

Approved

UI DESIGN

PULSE

Dashboard My Records AI Assistant Access Control Profile Connected (Not Connected)

Filters 6/6

Search records

Select Category

Select Provider

Newest First

Advanced

Date

From dd-mm-yyyy To dd-mm-yyyy

Storage

All Storage Types

Flags

Medical Records

Total Records 6 Filtered 6 AI Summaries 3 Selected 0

Annual Physical Examination Aug 10, 2024 General Hospital Ipfs

Comprehensive annual health checkup including vital signs, blood work, and general assessment.

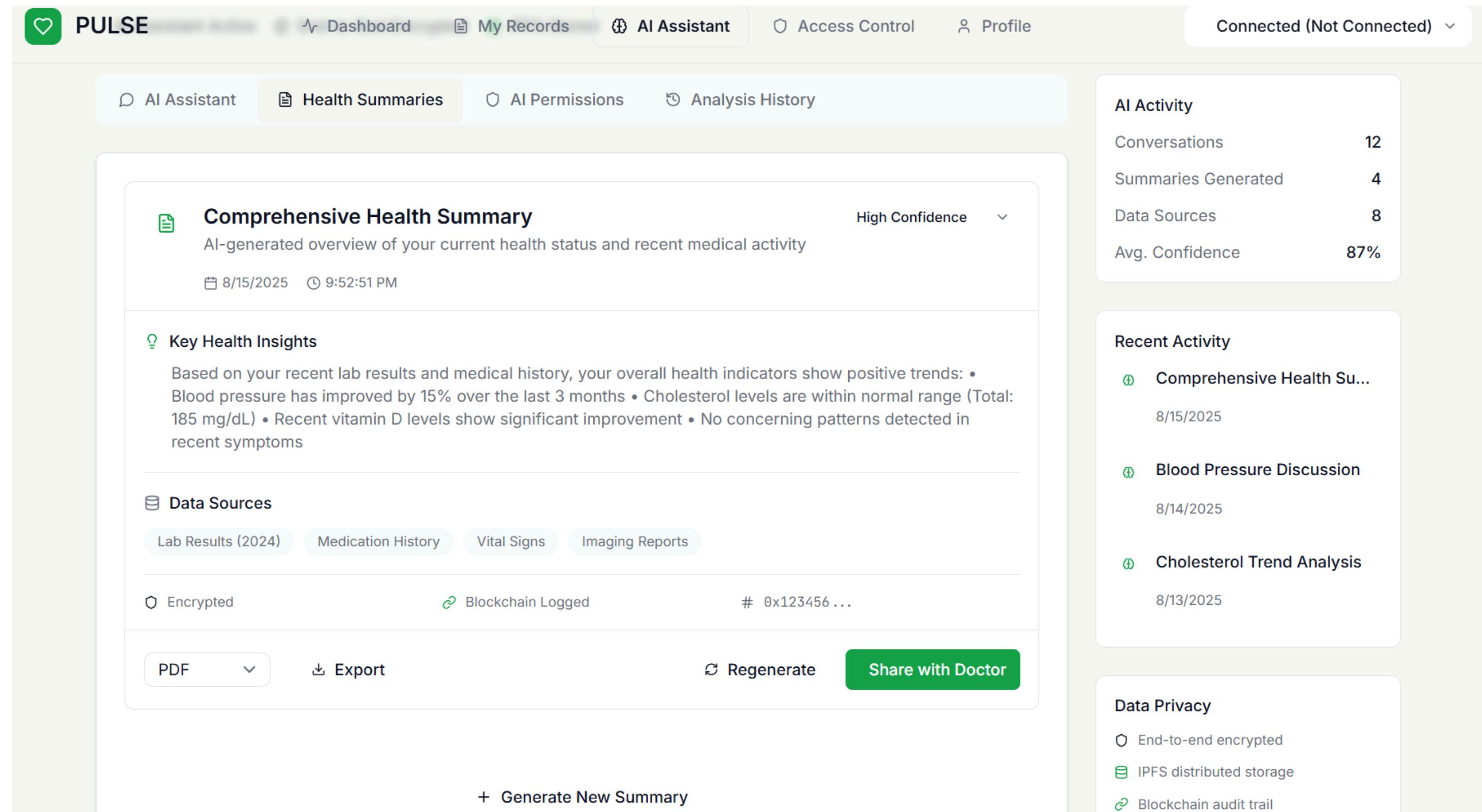
Blood Chemistry Panel Aug 5, 2024 Diagnostic Laboratory Ipfs

Comprehensive metabolic panel including glucose, lipids, liver function, and kidney markers.

Penicillin Allergy Documentation Jul 15, 2024 City Medical Clinic Onchain

Documented severe allergic reaction to penicillin with hives and difficulty breathing.

UI DESIGN



The screenshot displays a user interface for a medical AI application named "PULSE". The top navigation bar includes links for "Dashboard", "My Records", "AI Assistant" (which is currently selected), "Access Control", "Profile", and a status indicator "Connected (Not Connected)".

The main content area features a tabbed navigation with "AI Assistant" (selected), "Health Summaries" (active), "AI Permissions", and "Analysis History".

A central card titled "Comprehensive Health Summary" shows "High Confidence" and an AI-generated overview of the user's current health status and recent medical activity, dated 8/15/2025 at 9:52:51 PM.

Below this, the "Key Health Insights" section highlights positive trends: blood pressure improvement by 15%, cholesterol levels within normal range (Total: 185 mg/dL), and significant improvement in vitamin D levels. It also notes no concerning patterns detected in recent symptoms.

The "Data Sources" section lists "Lab Results (2024)", "Medication History", "Vital Signs", and "Imaging Reports". It indicates that the data is "Encrypted" and "Blockchain Logged" with a hash value "# 0x123456...".

Action buttons at the bottom include "PDF", "Export", "Regenerate", and a prominent green "Share with Doctor" button.

On the right side, three sidebar cards provide additional information: "AI Activity" (Conversations: 12, Summaries Generated: 4, Data Sources: 8, Avg. Confidence: 87%), "Recent Activity" (listing the "Comprehensive Health Summary" from 8/15/2025, "Blood Pressure Discussion" from 8/14/2025, and "Cholesterol Trend Analysis" from 8/13/2025), and "Data Privacy" (End-to-end encrypted, IPFS distributed storage, Blockchain audit trail).

At the bottom center is a button labeled "+ Generate New Summary".

UI DESIGN

PULSE

- Dashboard
- My Records
- AI Assistant
- Access Control**
- Profile
- Connected (Not Connected) ▾

🛡️ Active
3
Active consents

⌚ Pending
2
Awaiting approval

⌚ History
3
Total records

👤 Contacts
3
Emergency contacts

[Active Consents 3](#)
[Pending Requests 2](#)
[Consent History 3](#)
[Emergency Access](#)
[Generate NFT](#)

Active Consents

[Manage Contacts](#)

 Dr. Sarah Johnson
Cardiologist active

Granted Access:
Medical History Lab Results Prescriptions

Expires: 14d 23h remaining

[View Details](#) [Revoke](#)

NFT Token: #12345

 City General Hospital Multi-Sig active
Hospital System

Granted Access:
Medical History Allergies Emergency Contacts
Vital Signs

Expires: 1d 23h remaining

[View Details](#) [Revoke](#)

NFT Token: #12346

 MedResearch Institute active
Research Organization

Granted Access:
Lab Results Imaging Reports

Expires: 89d 23h remaining

[View Details](#) [Revoke](#)

NFT Token: #12347

UI DESIGN

PULSE

Dashboard My Records AI Assistant Access Control Profile Connected (Not Connected)

Consent History Export History Filter

Dr. Sarah Johnson
✓ Cardiologist Access Granted Aug 1, 2025, 09:53 PM

Data Categories: Medical History Lab Results Prescriptions

Transaction: 0x3c4d5e6f...ef123456 Block: #18445123

Details: Initial consent granted for cardiac evaluation and ongoing treatment monitoring.

Gas Used: 0.0032 ETH

[View Details](#) [Block Explorer](#)

immutable Blockchain Record

Dr. Robert Kim X General Practitioner Access Revoked Jul 2, 2025, 09:53 PM

Data Categories: Medical History Prescriptions

Transaction: 0x4d5e6f78...12345678



AUDIT TRAIL



MedLedger Audit Trail Report

Contract Addresses:

ConsentManagement: 0x0d751e84b57eAaA69b552f1902030414A3D7c595
MultiSignatureAccess: 0xF011343a99C95946CD5f6Ca0A83206c211f1E185
RecordRegistry: 0x76B09C3134739F16222c0DFB3b94841212b5e239

CONSENT MANAGEMENT AUDIT TRAIL:

✓ Consent Granted Events: 6

1. Patient: 0xea1c0f66...
Accessor: 0xb72566d5...
Data Type: blood-test
Block: 19
Transaction: 0x6b17dfaec1ebd0519afd8b4944bb69c2407276bf959464e220bb2666f5501df7
2. Patient: 0xea1c0f66...
Accessor: 0xb72566d5...
Data Type: surgery-records
Block: 23
Transaction: 0x89554915b1f09ab8909fe506126beb25d6993fac67b6d0a899aecab296fb79d
3. Patient: 0xea1c0f66...
Accessor: 0xb72566d5...
Data Type: blood-test
Block: 33
Transaction: 0xd999d6505c18d949aa8f57085e893d17dc14417cf038bd5f13bdb4aae345e2d0
4. Patient: 0xea1c0f66...
Accessor: 0x75cdF1B9...
Data Type: surgery-records
Block: 34
Transaction: 0x6fbcc9b708b82c544cde85a72bf189e17b5e05910375a94c885f86f66aa871b8
5. Patient: 0xea1c0f66...
Accessor: 0xb72566d5...
Data Type: blood-test
Block: 39
Transaction: 0x5a0781a68c3fae44393c4df218df1208be4a5f7a3ecfdb4a8ad92b2a9709f177
6. Patient: 0xea1c0f66...
Accessor: 0x75cdF1B9...
Data Type: surgery-records
Block: 40

MULTI-SIGNATURE ACCESS AUDIT TRAIL:

Proposals Created: 1

1. Proposer: 0xb72566d5...
Patient: 0xea1c0f66...
Data Type: surgery-records
Reason: Need surgery records for follow-up treatment
Required Signatures: 3

Proposals Approved: 3

Proposals Executed: 1

RECORD REGISTRY AUDIT TRAIL:

AUDIT TRAIL

Records Registered: 2

1. Patient: 0xea1c0f66...
Provider: 0xb72566d5...
Data Type: blood-test
IPFS Hash: QmBloodTestHash123abc456def
Encrypted: true
Time: Sat Aug 16 2025 20:49:15 GMT+0530 (India Standard Time)

2. Patient: 0xea1c0f66...
Provider: 0xb72566d5...
Data Type: blood-test
IPFS Hash: QmTestBloodResults123
Encrypted: false
Time: Sat Aug 16 2025 21:25:09 GMT+0530 (India Standard Time)

Record Access Events: 3

1. Accessor: 0xb72566d5...
Patient: 0xea1c0f66...
Reason: Reviewing blood test results for diagnosis
Time: Sat Aug 16 2025 20:49:15 GMT+0530 (India Standard Time)

2. Accessor: 0xea1c0f66...
Patient: 0xea1c0f66...
Reason: Patient reviewing test results
Time: Sat Aug 16 2025 21:25:09 GMT+0530 (India Standard Time)

3. Accessor: 0xb72566d5...
Patient: 0xea1c0f66...
Reason: Doctor reviewing for treatment planning
Time: Sat Aug 16 2025 21:25:09 GMT+0530 (India Standard Time)

THANK YOU

TEAM ARCHBTW