

KNOW YOUR SEGMENT

HOW AI APPLICATIONS CAN BUILD BETTER HEALTHCARE PRODUCTS

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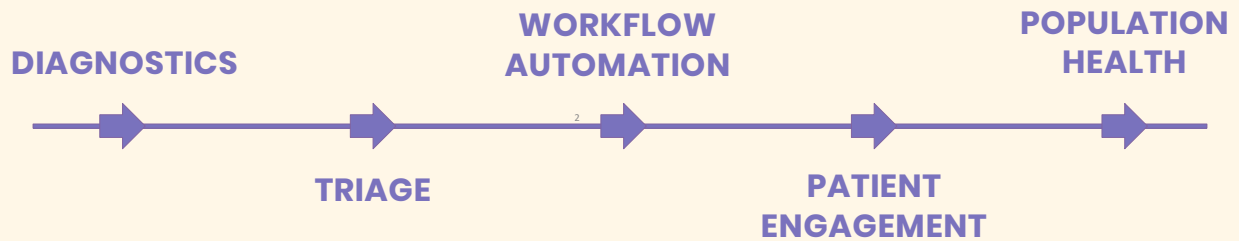
One Size Fits None



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AI is Touching Every Layer of Healthcare



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3 Common Product Traps



Tech-First Trap

Built for the algorithms, not the user



Generic User Trap

One dataset fits all



Integration Gap

Great models, poor real-world fit

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The 5-Point Checklist

1. Problem Definition

2. Population Fit

3. Workflow Integration

4. Equity & Bias

5. Segment Prioritization

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1 Problem Definition

Shape problem framing, not just messaging

- Use LLMs to brainstorm and surface underserved subsegments
- Reframe vague problems into specific, addressable opportunities



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2 Population Fit

Test your data, not your assumptions

- Use clustering to reveal overlooked segments hiding in plain sight
- Identify gaps where current models underrepresent key populations

Tools: Tableau (clustering), scikit-learn, H2O.ai

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3 Workflow Integration

Design for real pathways, not ideal ones

- Use scrappy persona simulations to map actual care entry points
- Spot mismatches between model workflows and real-world patient journeys



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4 Equity & Bias

Interrogate performance across groups, not just overall metrics

- Audit models to reveal disparate performance by subgroups
- Flag and address gaps to build trust and avoid downstream harm

Tools: Fairlearn, AI Fairness 360, Google What-If Tool

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5 Segment Prioritization

Size what matters, focus where it counts

- Estimate TAM/SAM directionally to compare segment potential
- Prioritize segments with unmet need and strategic fit for early focus



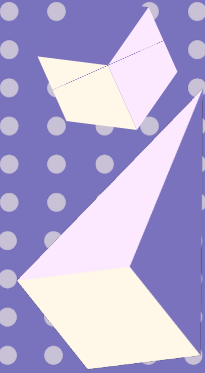
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Mini Case Study

Women's Cardiovascular A Missed Segment

Using the Kaggle Framingham Heart Study dataset



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Problem Definition

Brainstorm with LLM (ChatGPT)

Prompt

Act as a healthcare product strategist. I'm developing an AI tool for cardiovascular risk detection. Identify underserved subsegments of women over 40 who may experience cardiovascular disease differently. Explain why they are overlooked.

Output

Perimenopausal women with atypical symptoms are often overlooked because current models are built on male symptom patterns.

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Population Fit

Use clustering to find underrepresented subgroups

Prompt

Analyze this cardiovascular dataset. Use clustering to uncover any underrepresented female subgroups with distinct symptom patterns that differ from the typical male presentation.

Output

Clustering surfaced a small (~4%) group of older women with high blood pressure and no smoking history — a profile current models often miss.

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Workflow Integration

Persona simulation reveals different clinical entry points

Prompt

Simulate the care journey of a 55-year-old woman in rural North Carolina with cardiovascular symptoms. Identify her likely entry point to care, how it differs from typical cardiology-first workflows, and suggest adjustments.

Output

Rural women often enter care through OB/GYN or community clinics, not cardiology, so triage tools must shift upstream.

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Equity & Bias

Use tools like Fairlearn or prompt ChatGPT to mimic their function

Prompt

Pretend you're Fairlearn. Audit this heart risk model for differences between men and women. Show group metrics and flag big gaps.

Output

The dataset was built for men; the model flagged more male cases and false alarms. The next step is collecting cleaner, more representative data.

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Segment Prioritization

Identify underserved segment and market size

Prompt

Identify an underserved female subgroup in the dataset, explain why they're under-detected by the model, and estimate the U.S. market size for this population using prevalence and demographic data.

Output

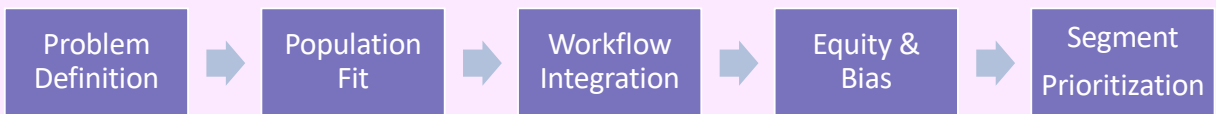
Women 40–60 with high cholesterol and blood pressure are under-detected (15–20% more missed cases than men) and represent a ~10M person U.S. market in OB-GYN/primary care with major early-detection upside.

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Your Playbook for Building Better Healthcare AI

Start with insight. End with scalable impact.



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Segmentation Isn't Optional

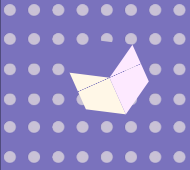
Scan the QR to grab the 1-page checklist & prompts



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Thank you!



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