



# BenefitsFlow

A Data-Driven Solution for a Seamless  
Benefits Navigation Experience



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# Agenda

## Fragmented Anti-Poverty Support Systems

1. Overview
  - a. Problem/Impact
  - b. Findings
  - c. Target User
2. MVP & Data
3. Project Planning
  - a. Roles/Timeline
  - b. Ethical/Privacy Considerations
  - c. Open Questions
4. Conclusion

# Problem: Overview

## Poverty in America

If America's population living in poverty founded a country, that country would have a **bigger population than Australia or Venezuela.\***

- There are more than **38M people** living in the US who cannot afford basic necessities\*
- **40%** of U.S. residents will experience a year or more of poverty in their lifetime\*\*
- **69%** of U.S. residents have less than \$1K saved\*\*



\*Desmond, M. (2023). *Poverty, by America*. First edition. Crown.

\*\*Wilson Sheehan Lab for Economic Opportunities, [Mission Statement](#)

# Problem: Impact Area

## An Issue of Benefits Avoidance



About \$140B in government benefits Congress has authorized goes unclaimed every year:\*

- 1 in 4 families who qualify for Temporary Assistance for Needy Families apply for it
- 1 in 5 parents eligible for govt health insurance do not enroll (\$62.2B)
- Supplemental security income also has high rates of unclaimed benefits (\$38B)
- 1 in 5 workers who qualify for the Earned Income Tax Credit do not claim it (\$17.3B)
- 48% of elderly Americans who qualify for food stamps sign up to receive them (\$13.4B)



\*Desmond, M. (2023). *Poverty, by America*. First edition. Crown.

Tackling the Time Tax - How the Federal Govt is Reducing Burdens to Accessing Critical Benefits and Services, 2023, Biden White House



# Target Users



1

## Primary

Consumers needing quick, trustworthy, and tailored benefits guidance

2

## Secondary

Social service staff benefit from tailored information (but not main target user)



# Current Landscape & Market Opportunity



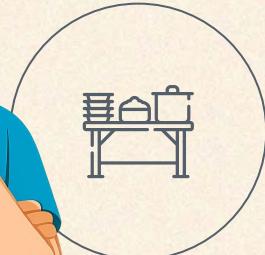
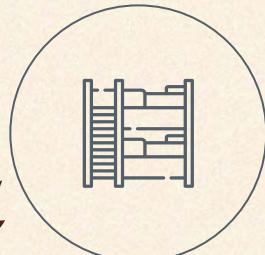
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## FindHelp

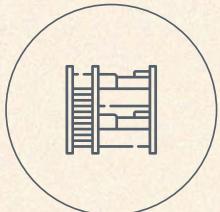
Public benefit corporation startup that targets social service providers more, integrating referrals and consolidated search across food, health, transportation, etc and national reach

## BenefitsCal / Robin Chatbot

BenefitsCal is California's website for several government social service programs, Robin chatbot simple limited chatbot

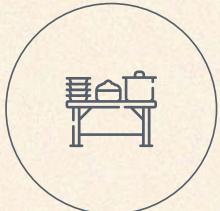


# Ongoing Product Research



## Primary - SME Interviews

- Early SME convos → staff at LEO research lab, nonprofits
- Goal to validate assumptions → eligibility hurdles, trust cues, reducing staff burden / most common questions, areas of most need, scoping, efficacy of digital tool



## Secondary - Desk Research

- “Time tax” → long forms, frequent policy changes → errors, drop-offs
- Understaffed agencies + poor UX → mistrust, stigma, reduced enrollment
  - Only **53%** of benefits programs have a mobile responsive website available
  - Low-income Americans are **more likely** to be smartphone dependent for internet
- **California** has the largest population below poverty level in the US

# Current Experience Gaps



## Pain Points

- Confusing application process and requirements
- Keeping up with policy/eligibility changes
- Minor mistakes = rejected applications
- Missed renewals = cancellations

## Current Options

- DIY via websites/forms → Potential errors → Rejected applications
- Overloaded social workers → Delays due to overwork → Limited support

## Goal:

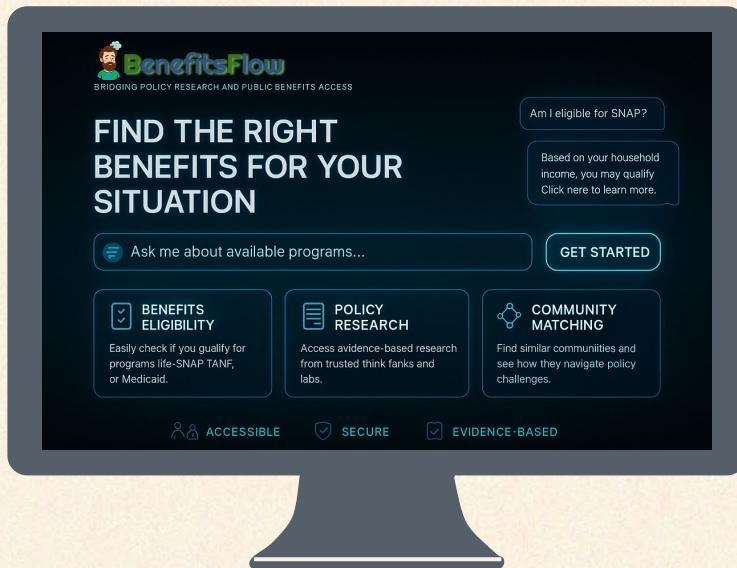
Smooth, intuitive process →

more complete applications, more self-serve success, less stress



# Solution

## Benefits Intelligence Platform



A Data-Driven Solution for a  
Seamless Benefits Navigation Experience



# MVP

**Conversational AI pulling credible sources → clear steps + downloadable checklist**

Program/State selection: Criteria = Need + Impact + Feasibility (basic digital literacy)

## Features



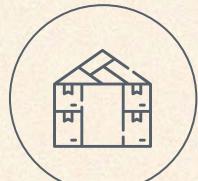
### Chat Interface

High-quality coverage over breadth



### Research Database

Centralized, credible program info (1 state, selected programs)



### Privacy

Session-based, no user data stored





# Data Sources

## Priority Fields

Benefit Program	Eligibility Criteria	Types of Benefits	Application Process	Last Updated
Program name (e.g. Medicaid, SNAP, TANF)	Example: Income range, age, household size	e.g. <b>SNAP</b> : grocery funds, farmers market discounts	Application Requirements (docs, forms)	Date when data was last scraped
Support contact info		e.g. <b>Medicaid</b> : hospital visits, prescriptions, maternal care	Renewal Requirements	

# Data Sources Examples



## Helpful Websites for Scraping

- Wilson Sheehan Lab for Economic Opportunities:  
<https://leo.nd.edu/partners-projects/health-projects/>
- Opportunity Insights: <https://opportunityinsights.org/data/>
- Federal: <https://www.usa.gov/benefit-finder>
- Focus on one state (California example):  
<https://benefitscal.com/>



# Project Management

## Team Roles



01



02



03

### Godsee

Resident SME,  
Project /  
Product  
Manager, EDA,  
Model  
Evaluation

### Deric

MLE/NLP,  
Front-End MVP  
application  
developer

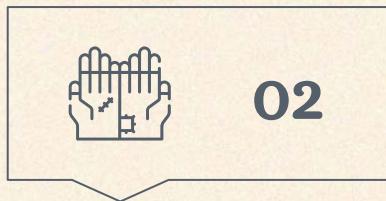
### Maya

Non-NLP ML,  
Infra/Data  
Engineering,  
Deployment,  
Documentation,  
Design/branding



# Project Management

## Timeline



**Oct 3**

Conduct/finish  
most interviews  
with SMEs

**Nov 2**

Begin testing &  
evaluation of  
product

**Nov 16**

Deploy model  
and develop  
frontend

**Nov 30**

Finalize product,  
with buffer for  
continued work

# Ethical Considerations & Privacy Framework



## Privacy-first

Session-based, anonymized; no PII stored



## Transparency

Source links + “last updated” timestamps (click-to-expand)



## Accessibility

Mobile-first, English for MVP, plain-language outputs



## Trust & Safety

User feedback flag + scheduled re-checks of scraped data



# Open Questions & Challenges



## Scoping

- Many areas of public benefits - health, SNAP, unemployment, housing, etc.
- Federal vs. state programs
- Which is low hanging fruit & most impactful?



## Data Retrieval & EDA

- Database for storing information for retrieval
- Perform API calls and/or live searches for retrieval



## Metrics

- Evaluating non-labeled data
- Human evaluation
  - Reaching potential users
  - Number of users
  - Number of responses
- Any automated metrics for evaluation?



# Conclusion

Empowering Research-Based Anti-Poverty Action

# Technical Approach



## Research

Despite being red,  
Mars is a cold place

## Data study

Venus is the second  
planet from the Sun

## Analysis

Jupiter is the biggest  
planet of them all

## Comparison

Saturn is the only  
planet with rings





# Technical Approach

Mercury is the small

01



RAG

Venus is the second planet from the Sun

02



NLP

Despite being red, Mars is a cold place

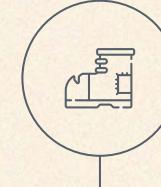
03



Similarity Scoring

Jupiter is the biggest planet of them all

04



Saturn

Saturn is a gas giant and has several rings

# Summary of the results

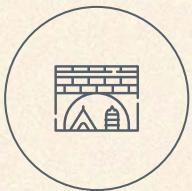


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## Venus

Venus is the second planet from the Sun



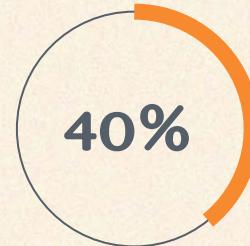
## Neptune

Neptune is the farthest planet from the Sun



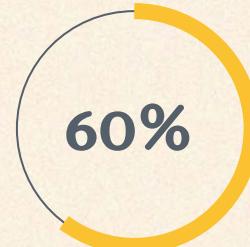
## Jupiter

Jupiter is the biggest planet of them all



## Mercury

Mercury is the closest planet to the Sun



## Mars

Despite being red, Mars is actually cold