NourishNet: Better Access to UMD's Campus Food Pantry

Addressing food insecurity at the University of Maryland through ML solutions that enhance pantry operations and student access.

Made with GAMMA

Problem: Food Insecurity on Campus

Student Food Insecurity

Over **15%** of UMD students face food insecurity (2024 UMD Student Survey)
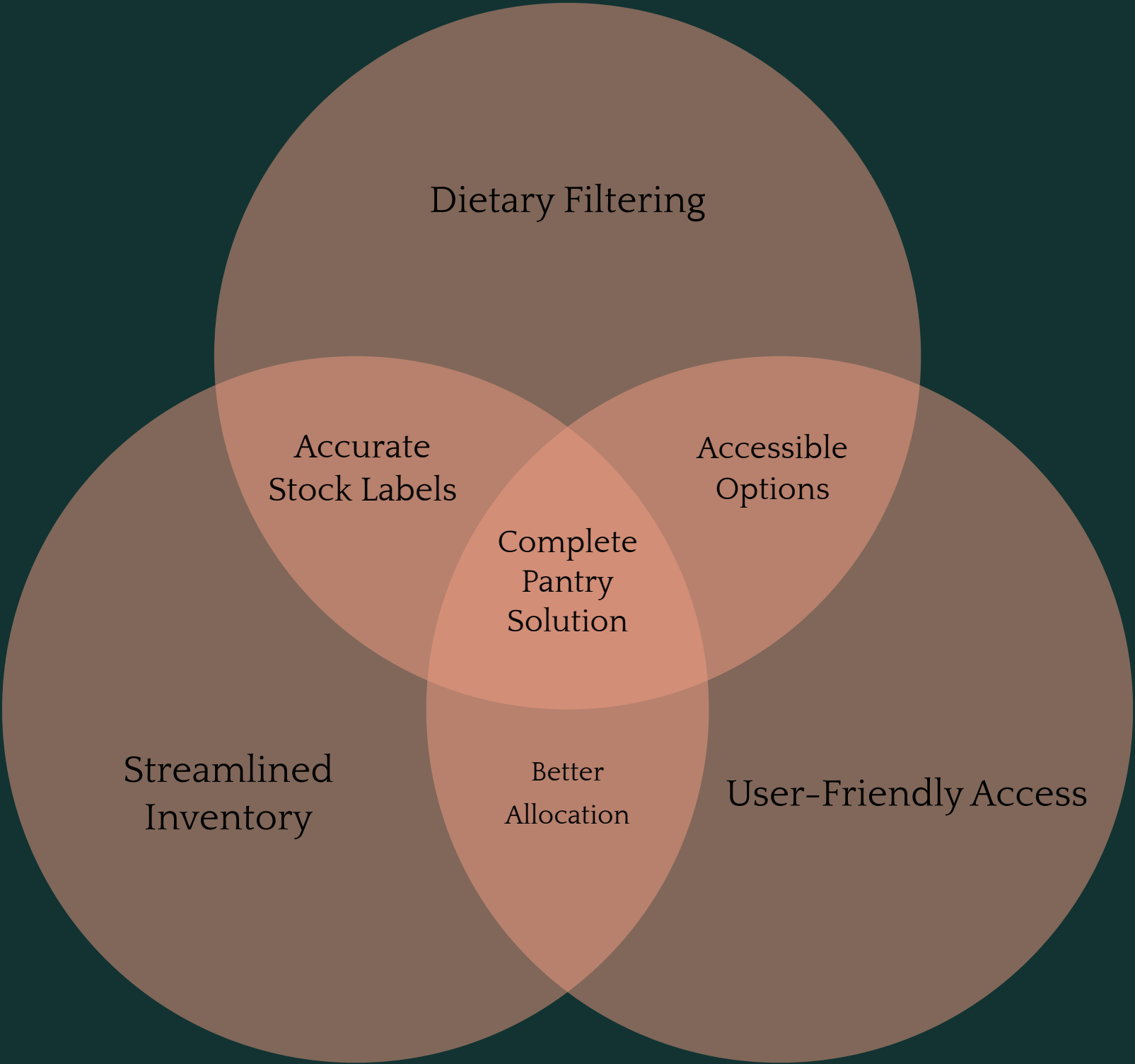
Stigma & Knowledge Barriers

Students in need often avoid seeking help due to social stigma or simply don't know about available resources

Poor Information Access

Current pantry information is scattered and difficult to navigate for those in immediate need

Solution: NourishNet

A digital platform connecting students with campus food resources

Dietary Filtering

Accurate
Stock Labels

Accessible
Options

Complete
Pantry
Solution

Streamlined
Inventory

Better
Allocation

User-Friendly Access

For Pantry Operations

Intuitive inventory management system that reduces
manual tracking and effort

For Students

Discreet access to real-time pantry information with
personalized dietary filtering to find suitable options

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Core Features

Pantry Management

- Automatic image-to-inventory conversion

- Logs the item with categories in a datasheet

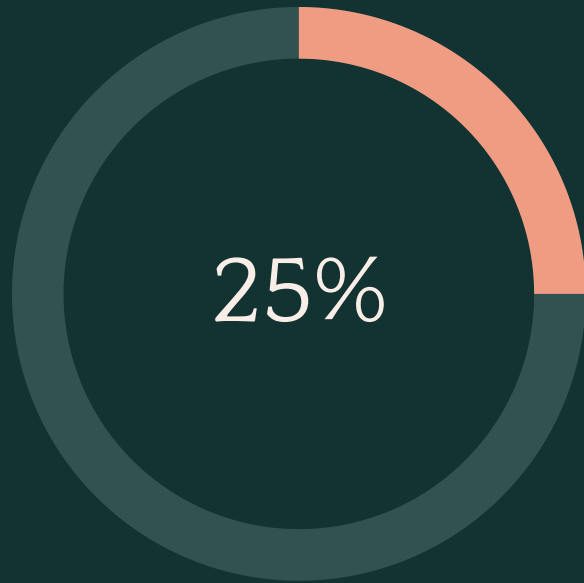- Provides the information for the student interface

Student Interface

- Dietary restriction filters (vegan, gluten-free, etc.)
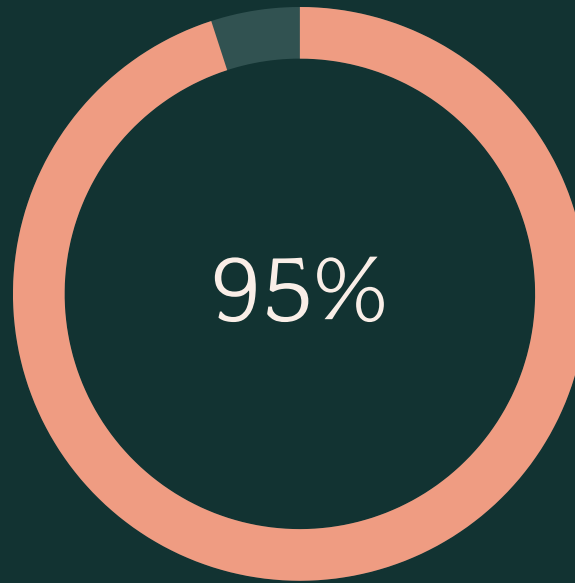
- Daily view of food and resources available

Success Metrics

How we'll measure NourishNet's impact on campus food security
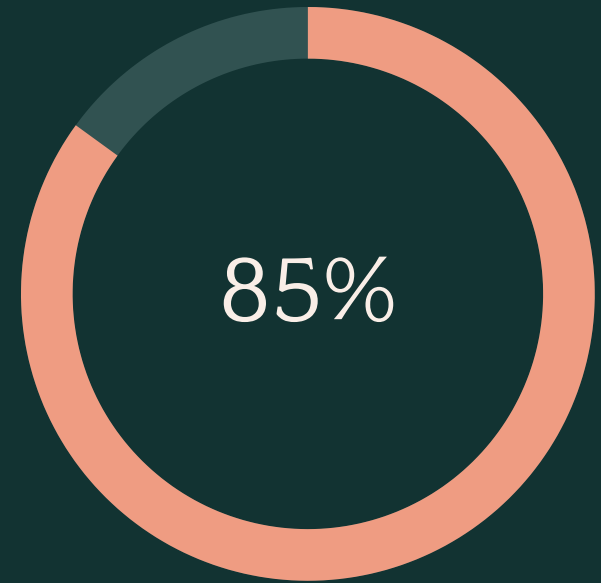
25%

95%

85%

Increased Utilization

Boost student pantry usage through improved accessibility and reduced stigma

Inventory Accuracy

Achieve near-perfect inventory tracking to minimize waste and ensure availability

User Satisfaction

Maintain high satisfaction scores from both students accessing resources and staff managing them

Key Personas

Students in Need

Primary goals: Find available food that meets their dietary needs quickly and discreetly

Pain points: Fear of judgment, uncertainty about eligibility, dietary restrictions

NourishNet solution: Anonymous browsing, clear availability, dietary filters

Pantry Staff & Volunteers

Primary goals: Efficiently manage inventory and serve more students

Pain points: Manual inventory tracking, unpredictable demand, limited resources

NourishNet solution: Automated inventory via a fine tune computer vision ML model

Upcoming Features

Improved ML Model for Categorization

Further refine the computer vision model to improve accuracy in item recognition

Student Interface Capabilities

- Detailed nutritional info
- Hours of operation
- Notification system for preferred item availability

Comprehensive Analytics Dashboard

Monitoring dashboard for pantry staff to analyze key metrics such as popular items, inventory turnover, and overall impact on students