

Scavenger 

Making invisible campus food discoverable in real time

Midterm Validation Pitch | **Team 8:** Ryan Tetro · Ava Williams · Allie Marshall · Eddy
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Visibility Failure

41%

of college students face food insecurity

Every Day

Tons of catered leftovers tossed — not from lack of supply

📌 Flyers aren't searchable — trapped in the physical world

👥 Group chats only reach existing in-groups

📱 Instagram posts decay before students see them

This is a **data problem**, not a food problem

BYU: The Perfect Pilot

37,205

students — Fall 2025 enrollment with hundreds of active clubs



@byufreefood

Instagram demand signal — proof the appetite already exists



Service Culture

Community orientation reduces stigma around free food



On-Campus Team

Rapid, live iteration and validation possible

The "Ghost Chase" Problem

- 1 **Flyers aren't digitized** — trapped in the physical world, not searchable
- 2 **Insider bias** — announcements only reach existing in-groups
- 3 **No source of truth** — once food is gone, no one updates the record
- 4 **Information decays instantly** — by the time you hear, it's already gone

Students arrive to empty rooms. The food was there — they just never knew. **The Ghost Chase.**

Our Solution: The Scavenger Loop



Upload Take a photo of any flyer on campus



Extract AI pulls time, location, and food type automatically



Broadcast Post appears on the real-time campus-wide feed



Verify "Mark as Gone" prevents ghost chases instantly

🚫 **No accounts** — browse like Instagram

⚡ **60-second post flow**

🔄 **Real-time sync** via Firestore

The Core Hypothesis

"If we make food discovery **instant** and browsing **anonymous**, students will repeatedly use Scavenger weekly."



< 60 sec to post leftovers



No login to browse the feed



30-min window for students to act



Weekly volume to sustain the feed

Voice of the Customer

"Any exposure is good exposure. I'm fine with people coming just for food if they sit through the event."

Kendall Castellaw

Past Finance Society President · Marriott School

"If it got more people to go to the club, then maybe. Sure — no harm in it."

Carson Fellows

Current Management Consulting President

Liability = non-issue · Motivation = **recruitment**, not waste reduction · Friction reduction is the unlock

What We Learned

Assumption	Status	Evidence
70%+ of events have physical flyers	⚠️ At Risk	Tanner is mostly digital — non-Tanner unknown, more interviews needed
Leftover supply is reliable	⚠️ At Risk	Both clubs rarely have leftovers; orders conservative
Organizers will post willingly	⚠️ Nuanced	Won't go out of their way — recruitment framing required (2/2)
Liability is a supply-side blocker	✓ Falsified	Zero concerns — 2 independent interviews
Food events are frequent	✓ Confirmed	Both clubs have food at events regularly

🔬 Falsification Test #1

Hypothesis: Liability would block organizers from posting

Result: Decisively falsified — zero concerns across 2 independent interviews

⚡ **The pivot signal:** Feed must surface food available *during* events, not just post-event scraps. Posting must be near-effortless or supply won't participate.

Competitive Mapping

Solution

Target

Post Friction

Campus UX

Olio

Community

Manual

Generic

Too Good To Go

Retail

Semi-Structured

Paid

Group Chats

Social

Manual

System & Leverage Points

📱 Next.js · TypeScript · React



▲ Vercel · Next.js API



✨ Gemini

⌚ pending

🔥 Firestore

✓ active

📁 Storage

✓ active

① **Digitize instantly** — Gemini removes ingestion friction (30x cheaper than GPT-4o)

② **Real-time truth** — Firestore listeners provide the "Now" view

③ **Trust mechanism** — "Mark as Gone" eliminates ghost chases

Built & Tested

✓ Shipped

Homepage · Leaflet map · feed preview

Feed + event detail pages

Upload API: Storage → Firestore

Upload form · Structured logger

⌚ In Progress

Gemini extraction · "Mark as Gone" ·

`onSnapshot`

▶ Live Demo

[Scavenger] [info]

{"event": "upload-success", ...}

📋 3 documented build cycles in changelog

📦 7 commits · `feat:` / `chore:` prefixes

🧪 `scripts/test.sh` → lint → build →
`logs/*.log`

The Ask



Done — Two interviews completed; recruitment framing and falsification confirmed

WEEK 2

Wire Gemini · confirmation form · demo becomes real

WEEK 3

Add "Mark as Gone" + `onSnapshot` · end-to-end pipeline complete

WK 4–5

Deploy to Vercel · 5–10 alpha testers · seed 10–15 real events

GATE

If traction: Expand to more buildings · add Slack/email ingestion · gamify organizer posting

If supply fails: Narrow to 2–3 high-volume clubs · add SMS/push alerts · incentivize with food access perks

GitHub: [avareesew/food_finder](#) · Deliverables: [aiDocs/prd.md](#) · [aiDocs/architecture.md](#) · [aiDocs/changelog.md](#)

Appendix

Supporting reference material

A — Personas

- **Tyler (Demand)** — Needs stigma-free, instant, anonymous food discovery on the go
Product decision: no login required

- **Sarah (Supply)** — Wants club attendance + less waste guilt. Posting must be fast.
Product decision: FDIA 2023 disclaimer built into post flow

- **Marcus (Advocate)** — Wants sustainability impact + easy floor broadcast
Product decision: quantified impact visible in the feed

B — Founding Hypothesis: Full Assumption Set

Assumption	Test	Status
Organizers post when friction < 60 sec	Club president interviews	 2/3+ done
Students act on alerts within 30 min	Alpha tester tracking — Weeks 4–5	 Pending
No login is an adoption unlock	No-auth MVP; measure conversion	 Pending
Enough events to sustain daily feed	Feed volume audit during alpha	 Pending

C — System Map

Club Events

~50/week at BYU

→

Leftover Food

Available

→

Scavenger

★ Leverage Point

→

Real-Time Feed

+ Campus Map

→

Students in Need

41% food insecure

Without Scavenger today: Food →  Wasted or informally shared – no real-time channel

D — Differentiation Grid

High Friction		Low Friction →
Campus-Specific ↑	 Campus Food Pantry — fixed hours, application required	 Scavenger — free, anonymous, real-time
Generic	(no viable option)	 Too Good To Go · Instagram · Group Chats

X-axis: Consumer access barrier · **Y-axis:** Campus food relevance

“ The top-right quadrant is unoccupied. We own the intersection of low friction + campus-specific. ”

E — Success & Failure Framework

Metric	Target	Failure Trigger	Response
Posts / week	30+	< 10 by Week 5	Club outreach · incentive experiment
Unique visitors	150+	—	Social media push
Weekly repeat users ★	25%	< 15% after Week 4	Improve CTA · RA partnerships
Ghost chase rate	< 5%	> 10%	Tighten human verification

Week 5 alpha gate: 70%+ of testers say "yes, I would use this regularly" — hard go/no-go

F — Documentation Pipeline

- `aiDocs/prd.md` — personas, competitive table, success/failure criteria, pivot plans
- `aiDocs/architecture.md` — verified API docs, tech decisions log with alternatives considered
- `aiDocs/changelog.md` — every update logged with test artifacts and customer discovery
- `ai/ gitignored` — raw working artifacts stay local; only decisions surface to tracked docs

“ Raw notes → `ai/notes/` → decisions → `aiDocs/changelog.md` → code ”

G — Structured Logging & CLI Pipeline

```
[Scavenger] [info] {"timestamp":"2026-02-24T18:35:11.000Z","level":"info","event":"upload-success","details":{"flyerId":"abc123","storagePath":"flyers/..."}}
```

scripts/test.sh

→

```
npm run lint
```

→

```
next build --webpack
```

→

```
logs/test-TIMESTAMP.log
```

→

aiDocs/changelog.md

3 documented build cycles · 7 commits · `architecture.md` revised across 3 sessions · 18 files touched by logging layer

H — Alternative Problems We Rejected



AI Recovery Coach — AI chatbot with guardrails for post-surgery/pregnancy recovery, integrated with biometric wearables

Rejected: High regulatory risk, healthcare liability, and integration complexity put MVP far out of reach in this timeframe



Dance Studio Attendance Manager — Text-based system to auto-update attendance, issue make-up credits, enforce policies

Rejected: Narrow niche, low team familiarity, no direct access to target customers for fast validation



Syllabus Parser — Extract every deadline from uploaded course PDFs and push to Google Calendar automatically

Rejected: Solves a friction problem, not a real pain — students already have multiple calendar tools; adoption would be low

Why Scavenger won: On-campus team = fast iteration · existing demand signal (@byufreefood) · tractable MVP · real emotional pain point we've all felt