ALDO

RETURN DETECTIVE

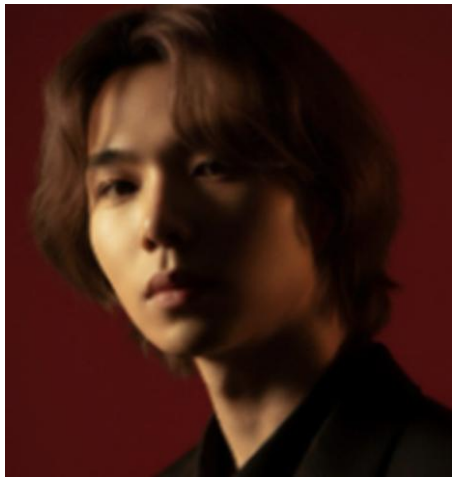
Every Return Is a Clue.

AN AGENTIC AI SYSTEM
FOR SMARTER RETAIL DECISIONS.



BSRM × ALDO · RETAIL GEN AI HACKATHON 2026

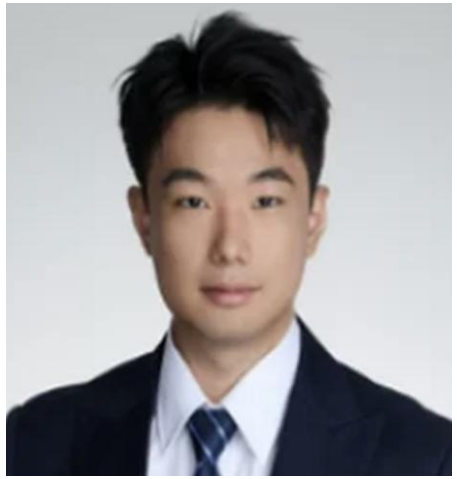
Meet The Team



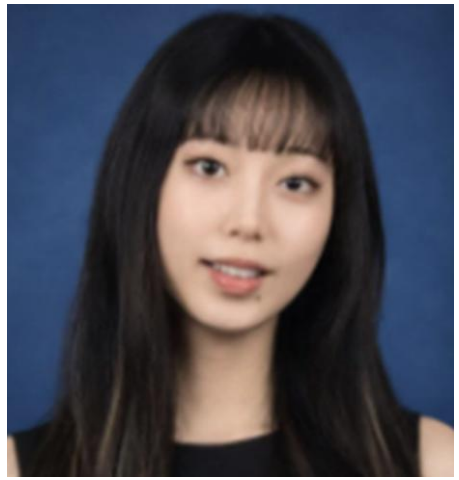
Alex Zhao



Vincent Wang



Chang Sun



Weiwei Xu



Shaoze Ying

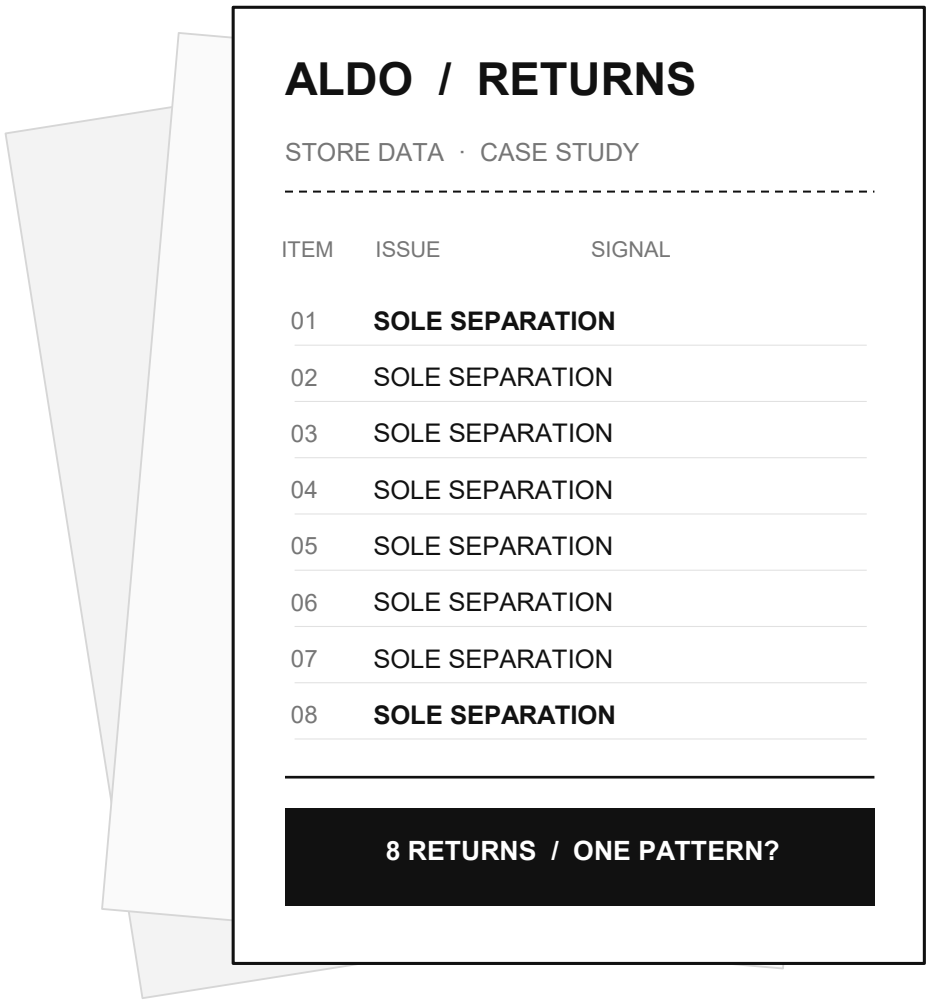
THE HIDDEN PATTERN / ILLUSTRATIVE SCENARIO

EIGHT REFUNDS. ONE PROBLEM?

Eight customers. Eight cities.
One boot. The same defect.

Refund-by-refund handling misses shared causes. Our thesis: investigate recurring complaints earlier to reduce avoidable return costs and repeat customer frustration.

8 SEPARATE RETURNS → 1 QUALITY SIGNAL



RECEIPT-STYLE VISUAL · NOT AN ACTUAL ALDO TRANSACTION

RULES SCREEN. AGENTS INVESTIGATE.

The model chooses evidence tools, tests explanations and proposes a response.

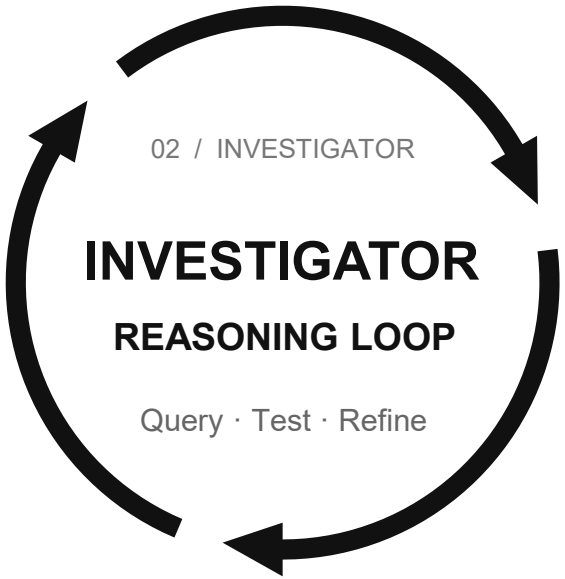
INPUT DATA | **RETURNS** | **ORDERS** | **EXCHANGES**

01 / DETECT

TRIAGE

Which products need review?

Daily SQL applies signal rules.
A user selects what to investigate.



WEAK EVIDENCE? QUERY AGAIN.

03 / RESPONSE

RESPONSE

Act or escalate?

Recommend actions within
code-enforced authority limits.

TOOL AUTHORITY CHECKS / HUMAN APPROVAL / SIMULATED RETAIL ACTIONS

ONE PRODUCT ISSUE. THE COMPLETE WORKFLOW.

LIVE DEMO

Screen a day. Inspect the tool path. Review the proposed action.

01
FIND A SIGNAL

02
INVESTIGATE

03
HUMAN DECISION

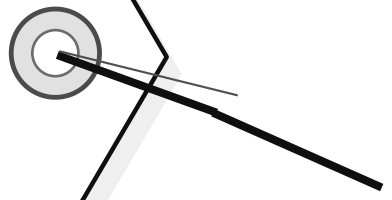
HISTORICAL REPLAY / GLINDAFIED

GLINDAFIED

OCT 28, 2024
FIRST QUALITY SIGNAL

5/11 QUALITY RETURNS

AN UNUSUAL PATTERN WORTH INVESTIGATING.



THIS PRODUCT / LAST 28 DAYS

45.5%
Quality-related share of returns

COMPANY / PRIOR HISTORY

4.2%
Quality-related share of returns

On Oct 28, 5 of 11 recent returns were quality-related, versus about 4.2% in prior company history.
This supports investigation. It does not prove a defect or measure the share of purchases returned.

OBSERVED SCREENING RESULTS / ASSUMED BUSINESS VALUE

INVESTIGATION AT SCALE. VALUE TO VALIDATE.

Historical data shows the workload. A planning scenario shows how effective action could create value.

OBSERVED / 2025 HISTORICAL REPLAY

889

PRODUCT ISSUE SIGNALS

First signal per product/reason pair. These are not confirmed defects.

ILLUSTRATIVE NET PLANNING VALUE / CASE

CAD 335

15 RETURNS AVOIDED*

+ CAD 40 CAPACITY*

*Assume 50 future returns × 30% avoided × CAD 30,
+ CAD 40 labor value − CAD 150 action − CAD 5 AI/query.
Planning scenario only. No realized savings verified.

493

PATTERNS THAT CONTINUED

Met the next-28-day persistence criteria

55.5%

28-DAY PERSISTENCE

493 of 889 signals persisted.
Persistence is not detection accuracy.

RISKS AND CONTROLS / RESPONSIBLE AI

AUTONOMY, WITH LIMITS.

Evidence supports a recommendation. People remain accountable for high-impact decisions.

01

MISDIAGNOSIS RISK

A SIGNAL IS NOT A CONFIRMED DEFECT

Test competing explanations. Confirm physical causes through inspection.

02

ACTION AUTHORITY

CODE LIMITS WHAT THE AGENT CAN DO

Missing policy facts block fee execution. Retail actions remain simulated.

03

PRIVACY AND BIAS

PROTECT IDENTITIES. VALIDATE FAIRNESS.

Identifiers are pseudonymized. Market and channel bias needs pilot testing.

HUMAN OVERSIGHT

HIGH-IMPACT ACTIONS REQUIRE APPROVAL

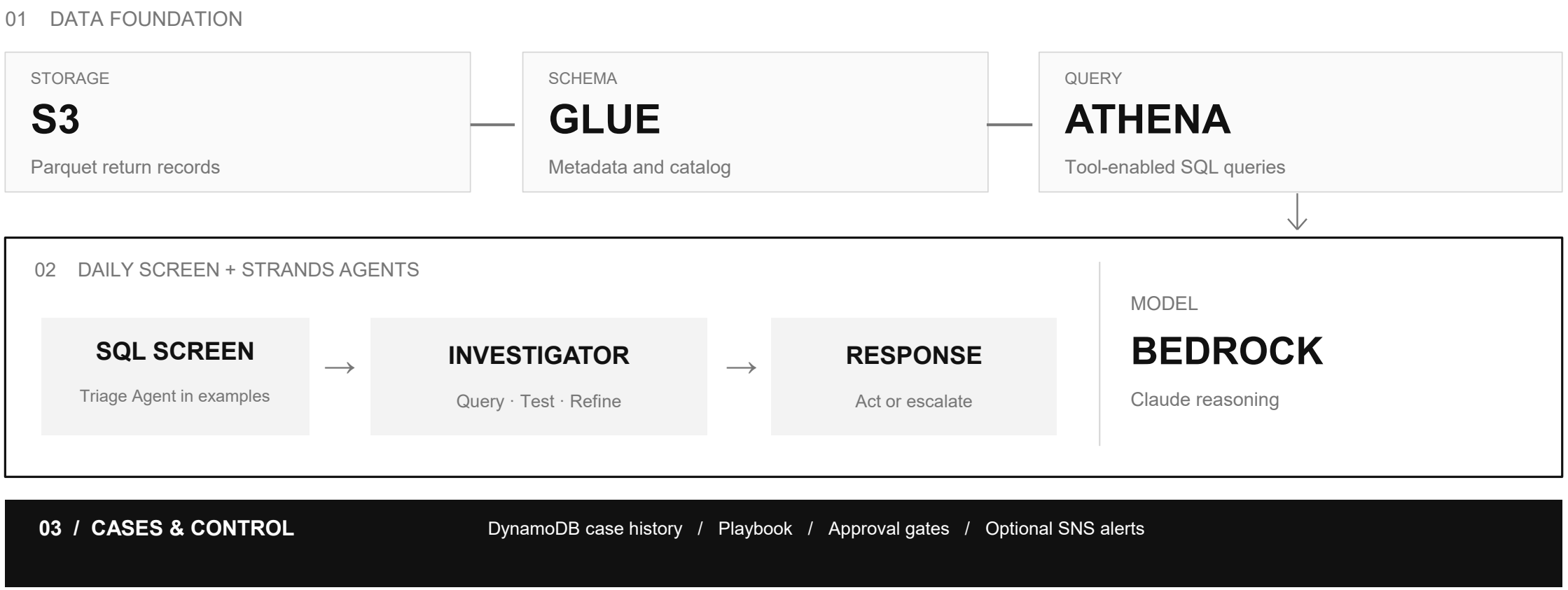
Stock holds, supplier claims and customer outreach need approval.

EXPLAINABILITY: Keep tool inputs, evidence and human decisions visible in the case history.

ENGINEERING / SYSTEM BLUEPRINT

LOCAL APP. AWS DATA AND REASONING.

Streamlit runs locally. Strands calls Bedrock and date-scoped data tools.

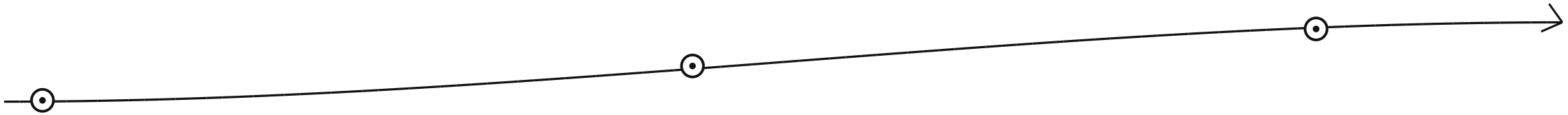


SNS email subscription tested; UI integration added. End-to-end app email remains to be verified.

FUTURE IMPROVEMENTS.

PRIORITIES AFTER THE HACKATHON

THREE MOVES.
ONE LONG-TERM VISION.



01 / DEPLOY

CLOUD DEPLOYMENT

RETURN DETECTIVE / TEAM WORKSPACE

CASE HISTORY

Shared access — Secure sign-in

VALUE

SHARED ACCESS FOR BUSINESS TEAMS

02 / FOLLOW THROUGH

TEAMS / SLACK NOTIFICATIONS

TEAM NOTIFICATION

Send case alerts to team channels

TEAMS / SLACK

VALUE

KEEP OWNERS MOVING CASES FORWARD

03 / VALIDATE

STRONGER EVIDENCE & BUSINESS VALIDATION

EVIDENCE SOURCES

INVENTORY | SUPPLIER | INSPECTION

VALUE

PROVE MEASURABLE BUSINESS IMPACT

RETURN DETECTIVE

THANK YOU

ALDO already has the clues.
Return Detective connects them.

