

AI Shopping Assistant MVP

1/2

Architecture & Delivery Overview for the Amazon + SMS/Text MVP

Khalid Osman | Senior Backend, API & Automation Developer

MVP outcome

A simple SMS experience that turns a customer request into a clear Amazon product recommendation, captures approval, creates a controlled employee purchasing task, and keeps the customer informed - without storing raw passwords or payment-card details.

High-level customer and operations flow



Security by design

- No raw Amazon passwords or card data stored
- Role-based employee access and audit trails
- Encrypted secrets and sensitive customer data
- Approved, practical account-access workflow validated first

Reliable at production scale

- Queued background work for slow or rate-limited tasks
- Idempotency, retries, timeouts, and failure recovery
- Monitoring for unresolved AI and retailer requests
- Load testing against the 200-concurrent-user target

Retailer-ready architecture

- A shared product and order data model
- Retailer adapters keep Amazon logic isolated
- Future Walmart, Target, or eBay support without a rebuild
- Revalidation of price and availability before purchase

Human-controlled purchasing

- Customer approval is explicit and recorded
- Employees receive the exact approved product and context
- Exceptions and failed requests enter a review queue
- Manual checkout remains the final MVP control point

AI Shopping Assistant MVP

2/2

Architecture & Delivery Overview for the Amazon + SMS/Text MVP

Khalid Osman | Senior Backend, API & Automation Developer

Proposed delivery plan

A milestone structure keeps security, integration risk, and acceptance criteria visible throughout the build.

1	Architecture and validation Confirm retailer data access, account-security approach, system boundaries, and acceptance criteria.	Sep 2, 2026	\$750
2	SMS assistant and product workflow Implement SMS conversation handling, product retrieval, comparison, recommendation, and approval capture.	Sep 18, 2026	\$1,500
3	Employee dashboard and order operations Create purchasing tasks, customer/order history, status updates, exception handling, and notifications.	Oct 2, 2026	\$1,500
4	Hardening, deployment, and handover Complete performance checks, monitoring, deployment, documentation, and production handover.	Oct 16, 2026	\$1,250

Recommended MVP foundation

Backend: Python and FastAPI
Messaging: Twilio SMS
Data: PostgreSQL or Supabase
Hosting: AWS with managed secrets and monitoring
AI: A suitable LLM provider selected for reliability, cost, and policy fit
Operations: Background workers, queues, audit logs, alerts, and role-based access

Discovery gates before build

1. Validate authorized Amazon data access for price, availability, and delivery.
2. Approve employee-assisted account access without stored credentials.
3. Define consent, retention, audit, and escalation rules.
4. Lock the MVP boundary and retailer-policy constraints.

Key delivery assumption

The fixed-price plan covers the defined Amazon + SMS MVP with employee-assisted purchasing. Automatic checkout, additional retailers, voice calling, or material changes to Amazon access requirements would be scoped separately after validation.