



Beta Presentation

Seller Agent Management Platform (SAMP)

The Capstone Experience

Team Amazon

Ziad Bakki

Jiwoo Jeong

Ethan Tunney

Meet Patel

Tyler Nguyen

Daniel Berezovsky

Department of Computer Science and Engineering

Michigan State University

Fall 2025



*From Students...
...to Professionals*

Project Overview

- Problem

- Amazon sellers spend many hours a week doing repetitive tasks to manage a storefront and grow their business.
- Otherwise, sellers spend \$1 - 10k a month on part-time employees and third-party software tools.

- Solution

- Seller Agent Management Platform's agentic orchestration layer replaces multiple third-party software tools and virtual assistants by automating repeatable workflows.
- Our agents are auditable and safe. The Seller Agent Management Platform agents provide full logs, explainable decisions, and approval gates so you can trust automation with real money and listings.
- Avoid losing time and money to manual effort.



Team Member's Technical Tasks

Technical Tasks Assigned

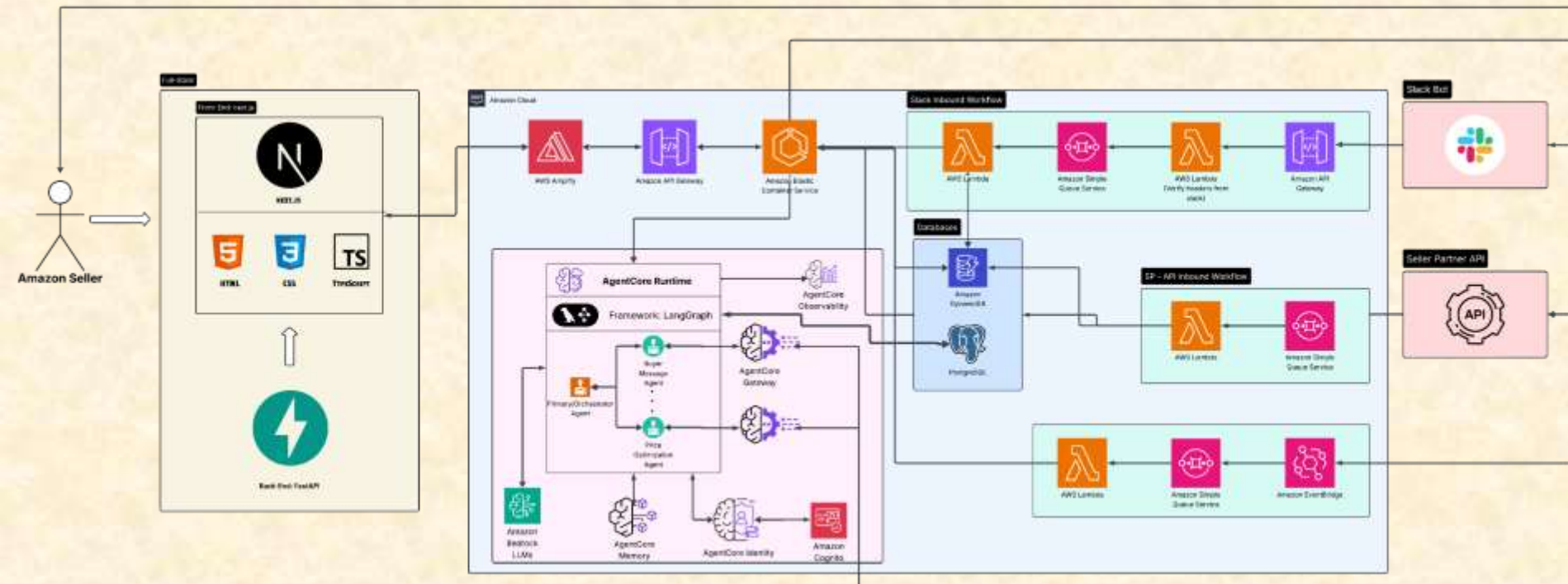
- Ziad Bakki
 - Home Page, Observability Section
 - SP-API and Slack Login Flow on frontend
 - Potential Rules, Exponential Backoff, DynamoDB Schemas
- Daniel Berezovsky
 - Implement Rules/Agent Guardrails/HITL System
 - Slack inbound Pipeline and connect EventBridge inbound pipeline
 - Slack and SP-API Auth flows on backend/db
- Ethan Tunney
 - Front End Create Agent, Premade Agents, Slack Rules Agent
 - Cron Scheduler
 - Front End Authentication With Cognito
- Jiwoo Jeong
 - Front End Action Center, Edit & Delete Agent, Context
 - Backend and Infrastructure for Agent Operation and Agent
 - Build Infrastructure for Eventbridge
- Tyler Nguyen
 - Supervisor Agent, Edit Tool Access, Long Term Memory
 - Active Agent Status
 - MCP Gateways, HITL for SP-API sub API JSON model
- Meet Patel
 - Set up AWS ECS cluster and Fargate service infrastructure
 - Slack integration & Agent invocation from the backend
 - Added database operations in backend

Technical Tasks Completed

- Ziad Bakki
 - Home Page, Observability Section
 - SP-API and Slack Login Flow on frontend
 - Potential Rules, Exponential Backoff, DynamoDB Schemas
- Daniel Berezovsky
 - Implement Rules/Agent Guardrails/HITL System
 - Slack inbound Pipeline and connect EventBridge inbound pipeline
 - Slack and SP-API Auth flows on backend/db
- Ethan Tunney
 - Create Agent, Predetermined Agents, Slack Rules agent
 - Cron Scheduler
 - Front End Authentication With Cognito
- Jiwoo Jeong
 - Front End Action Center, Edit & Delete Agent, Context
 - Backend and Infrastructure for Agent Operation
 - Build Infrastructure for Eventbridge
- Tyler Nguyen
 - Supervisor Agent, Edit Tool Access, Long Term Memory
 - Active Agent Status
 - MCP Gateways, HITL for SP-API sub API JSON model
- Meet Patel
 - Set up AWS ECS cluster and Fargate service infrastructure
 - Slack integration & Agent invocation from the backend
 - Added database operations in backend



System Architecture



Action Center and Agent Rules

The screenshot displays the Amazon Seller Agent Management Platform interface. The top navigation bar includes the Amazon logo and the text "Seller Agent Management Platform". The user's email, "tunneyet@msu.edu", is visible in the top right corner. On the left sidebar, under the "AGENTS" section, there are buttons for "Action Center" and "Slack Rules". Below these is a search bar labeled "Search agents...". The main content area is titled "Action Center" and includes a subtitle: "Approve or deny your agents' human-in-the-loop actions." A filter dropdown menu is set to "12 hours", with a note stating "Filter will apply to Approved/Rejected Actions". The interface is divided into three columns: "APPROVED", "PENDING", and "DENIED".

APPROVED

- getListingsItem**
Slack Default Agent
Approved At: Nov 10, 2025, 10:21 PM
Summary: Retrieved product listings data for SKU Grim-Farm-1 on the Amazon marketplace, including item summaries and current offers.
Auto Approved
- getSolicitationActionsForOrder**
Slack Default Agent
Approved At: Nov 10, 2025, 06:26 PM
Summary: Retrieved solicitation actions available for order 112-7360318-9749047 on the Amazon US marketplace to determine what customer communication options were permitted for this transaction.
Auto Approved
- getOrders**
Slack Default Agent
Approved At: Nov 10, 2025, 06:25 PM
Summary: The agent retrieved orders from the

PENDING

- updateCustomPricing**
Slack Default Agent
Requested At: Nov 10, 2025, 10:21 PM
Summary: A custom pricing update was applied to product SKU Grim-Farm-1 on the Amazon US marketplace, setting the value with tax to \$67.00.
Pending [Approve] [Reject]

DENIED

- updateCustomPricing**
Price Tracker
Rejected At: Nov 10, 2025, 10:24 PM
Summary: Updated custom pricing for SKU Grim-Farm-1 to a value of \$67.00 with tax included on the Amazon marketplace.
Rejected



Observability Rules

The screenshot displays the Amazon Seller Agent Management Platform interface. The top navigation bar includes the Amazon logo, the text "Seller Agent Management Platform", and a user profile icon for "tunneyet@msu.edu".

On the left sidebar, there are sections for "Action Center", "Slack Rules", and a "SEARCH" bar with the text "Search agents...". Below the search bar is a list of agents with icons and names: "SN snow", "DS Daily Summary A...", "PT Price Tracker", "SA SEO Agent", "IF Inventory Forecas...", "BM Buyer Message A...", "DP Dynamic Pricing ...", and "AA Ad Agent Maker".

The main content area is titled "Agent Observability" and includes a "Refresh" button. Below the title is a subtitle: "Monitor your agent's operations, tool usage, and approval workflows".

The "Agent Observability" section displays five metrics:

Total Runs	Total Events	Auto Approved	Auto Rejected	Pending Review
45	85	1	0	0

Below these metrics is a "Status Overview" section showing counts for "Approved" (0), "Pending" (0), and "Rejected" (2).

The "Agent Runs" section shows a list of runs with filters for "Start Time", "End Time", "Newest First", and "All Events". The first run is "Nov 10, 2025, 10:24 PM EST run for Buyer Message Agent (0 events)". The second run is "Nov 10, 2025, 10:23 PM EST run for Price Tracker (2 events)".

For the "Nov 10, 2025, 10:23 PM EST run for Price Tracker (2 events)", the events are:

- Nov 10, 2025, 10:24:52 PM **Rejected**
 - No Tool Used
- Nov 10, 2025, 10:24:05 PM **Pending**
 - No Tool Used



Slack Chat

The screenshot shows a Slack chat interface. At the top, there's a search bar with the text 'Search MSU Capstone - Team Amazon'. Below the search bar, the chat header for 'Seller Agent Management' is visible, including a star icon, a 'New Chat' button, and tabs for 'Chat', 'History', and 'About'. The main chat area shows a conversation between 'Ethan Tunney' and the 'Seller Agent Management' app. Ethan Tunney's message is 'Hello'. The app's response is a welcome message followed by a list of services: 'Orders & Customer Service', 'Pricing & Fees', 'Listings & Catalog', and 'Notifications'. The app also offers assistance with various tasks. Ethan Tunney's second message is 'Give me details about the last order.' The app's final response is a message stating that the request requires human approval and has been sent to the Approval Slack channel. At the bottom, there's a text input field with a 'Reply...' placeholder and a rich text editor toolbar.

Search MSU Capstone - Team Amazon

Seller Agent Management

Chat History About

Seller Agent Management APP

Helps sellers automate routine manual tasks.

[How to use Seller Agent Management?](#)

Ethan Tunney Oct 29th at 7:59 PM
Hello

Seller Agent Management APP Oct 29th at 8:00 PM
Welcome! 🙌

I'm here to help you with all aspects of your Amazon Seller operations, including:

- **Orders & Customer Service**: Track orders, manage shipping, communicate with buyers
- **Pricing & Fees**: Manage product pricing, calculate FBA fees, analyze sales data
- **Listings & Catalog**: Create and update product listings, manage inventory, handle bulk operations
- **Notifications**: Send yourself Slack alerts and updates about important activities

How can I help you today? Whether you need to check on orders, update pricing, manage listings, or anything else related to your seller account, I'm ready to assist!

Ethan Tunney Oct 29th at 8:00 PM
Give me details about the last order.

Seller Agent Management APP Oct 29th at 8:01 PM
Your request requires human approval. An approval request has been sent to the Approval Slack channel.
Your request requires human approval. An approval request has been sent to the Approval Slack channel.

Reply...



Approvals Channel

The screenshot shows a Microsoft Teams chat interface. At the top, there's a search bar with the text 'Search: in: #internal-general zoom'. Below the search bar, the chat title is 'approvals'. The chat history shows a message from 'Seller Agent Management' (APP) at 5:32 PM. The message content is: 'Agent wants to use tool 'listing_and_pricing__updateCustomPricing'. Approve or reject?'. Below the message, there's a 'Tool Call:' section with the following details: 'Listing_And_Pricing__Update Custom Pricing', 'marketplaceIds: ATVPDKIKX0DER', 'sellerId: d4d874e8-5021-7065-01e1-1bcdd3eb58a5', 'sku: Grim-Farm-1', and 'value_with_tax: 70.0'. A 'Summary:' section follows, stating: 'Updated custom pricing for SKU Grim-Farm-1 to \$70.00 with tax included on the Amazon marketplace.' Below the summary, there's a 'Rejection Reason' section with a text input field containing the placeholder text 'Enter reason for rejection (optional)'.



What's left to do?

- Features
- Stretch Goals
 - Real-time agent invocations
 - Agent access to Internet
- Other Tasks
 - Fix verbiage in UI
 - Add key for dot indicator
 - Add Animations



Questions?

?

?

?

?

?

?

?

?

?

