Case study:

AI Chatbot for onboarding optimization

SERVICE / APPLICATION:

Low-code platform for collaboration and remote work management

FIELD:

Software

DESCRIPTION:

Development of an AI chatbot to streamline the onboarding process for new employees.

TIME FRAME OF THE PROJECT:

March 2024

AWS SERVICES USED FOR IMPLEMENTATION:

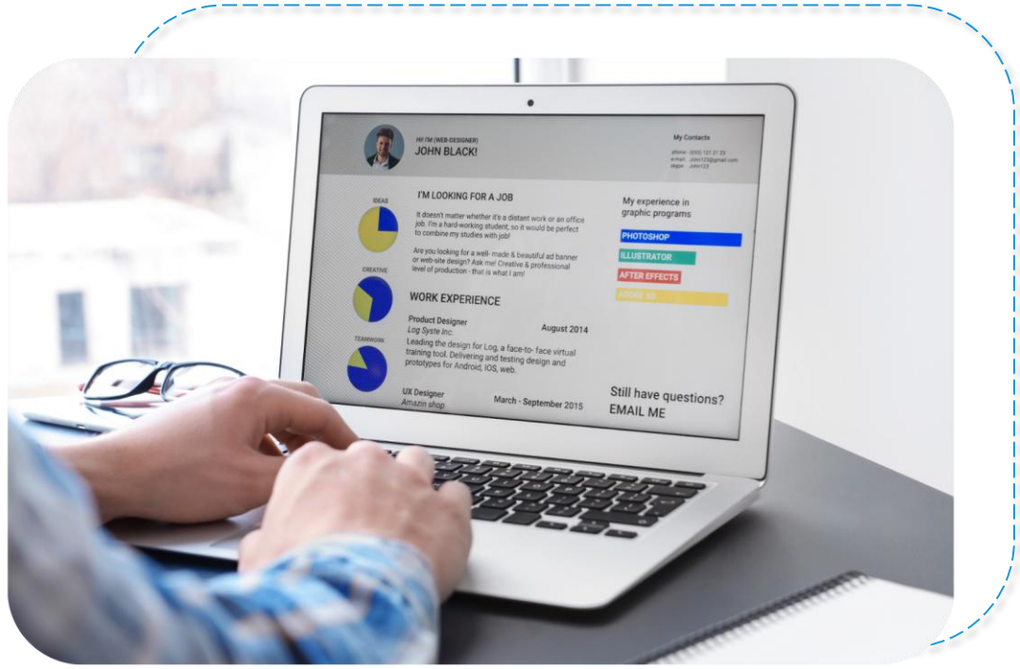
- AMAZON Q FOR BUSINESS
- AMAZON SIMPLE STORAGE SERVICE
- AWS BEDROCK

SOLUTIONS USED FOR THE IMPLEMENTATION:

- AUTOMATION
- GENAI

1 Client

One of our clients from the **Software industry** owns **an online low-code platform** designed for collaboration and remote work management. The platform's key functions include task assignment, project progress tracking, and employee calendar management, including scheduling meetings, document sharing, and onboarding new employees. The platform is primarily used by business professionals from various industries.



2 Case study: AI Chatbot for onboarding optimization

2 Challenges

The client faced a **lengthy onboarding process** for new employees, lasting up to **three months**, with **high implementation costs** due to the involvement of specialists and C-level executives. The onboarding process often proved inefficient and slow due to several factors:

- Key personnel responsible for onboarding were overloaded with other tasks, limiting their availability.
- New employees experienced declining motivation during the process.
- Communication barriers existed between mentors and new hires, who often hesitated to ask questions.

These challenges negatively impacted **onboarding effectiveness** and **slowed down team adaptation.**

2 Challenges

To begin the collaboration, we conducted a **Proof of Concept (PoC)** to assess the client's needs and capabilities. Identifying a high degree of process repetitiveness, we determined that **GenAI-based tools** would be the most effective solution.

Key objectives of our plan:

- Implementing automation to enhance communication at every stage of onboarding
- Reducing onboarding time for new employees
- Eliminating communication and process barriers
- Ensuring data isolation and a higher level of security for processed information

3 Implemented solutions

To address the outlined challenges, we assembled a dedicated team comprising GenAI Specialists, Data Scientists, DevOps Engineers, and Business Analysts. The entire process was based on best practices from the **AWS Cloud Adoption Framework for AI,** our team's expertise, and key criteria such as model efficiency, security, and data isolation.

To develop the **Chatbot**, we designed two Python-based applications to power Amazon Q for Business, a solution that enables **data analysis and AI-driven responses.**

A key element was the client's internal educational materials, including videos, PDF documents, and mentor responses, which were stored in an internal repository. Using AI, we transformed these resources into a knowledge base for the Chatbot, effectively replacing the mentor's role while maintaining a high level of support quality.

3 Implemented solutions

- The first application connects to AWS Bedrock and utilizes the Claude model to convert unstructured data into a standardized format.
- The second application is based on the Whisper model, generating transcriptions from video materials.
- Both applications run on AWS Lambda, a serverless computing service that automates execution and verifies file storage in Amazon S3, reducing infrastructure load.

The Chatbot is integrated with Slack, where it is triggered by entering a keyword in a dedicated channel. Once activated, it allows users to **ask questions and search verified internal databases**, delivering instant, AI-generated responses.

New employees can use **the Chatbot for onboarding-related inquiries**, receiving either text-based answers or direct links to relevant documents.

We used the following technologies:

Amazon Q
For Business

AWS Bedrock

AWS Lambda

Amazon Simple
Storage Service

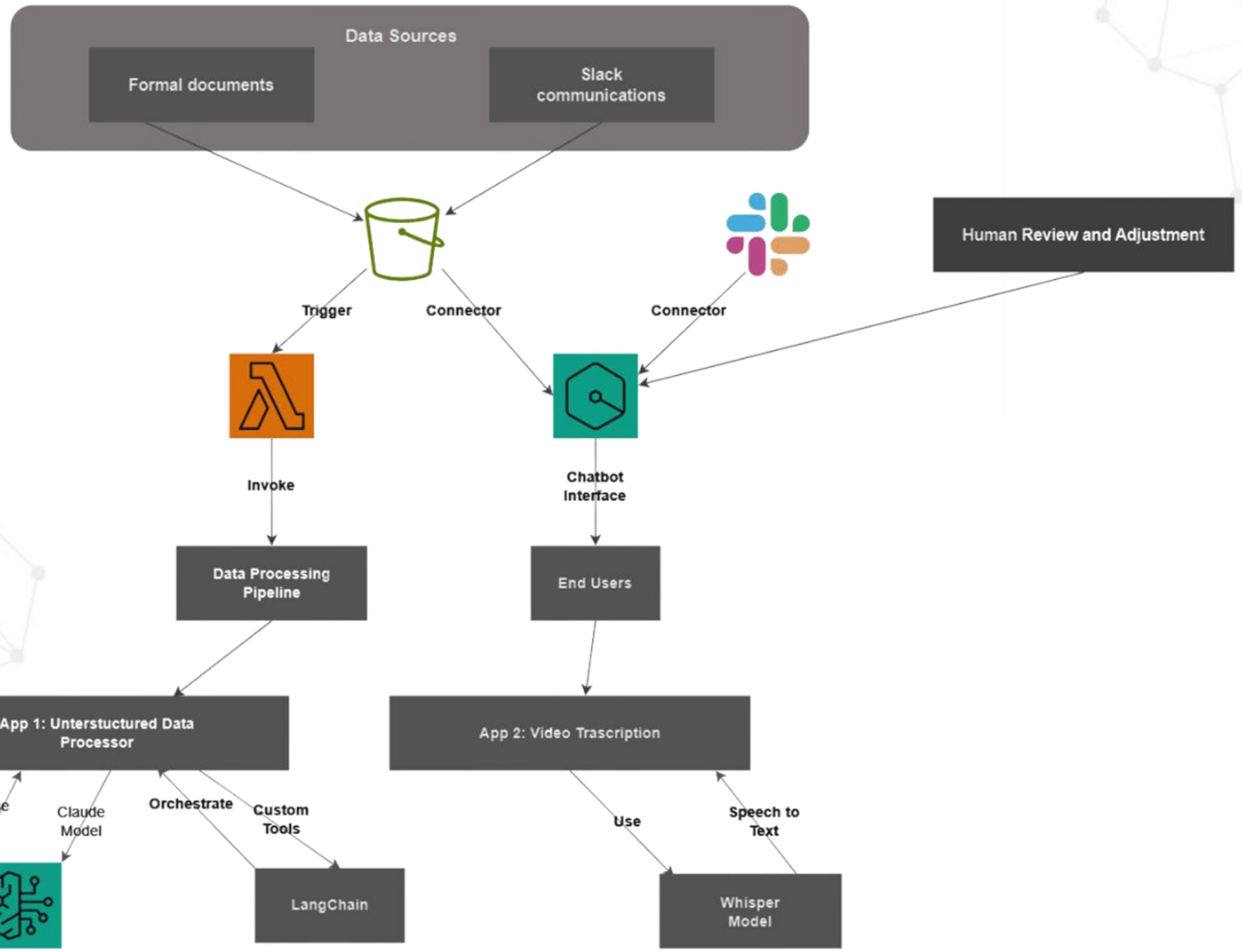
Slack

Langchain

Model AI: Whisper

Model AI: Claude

Infrastructure outline and AWS services:

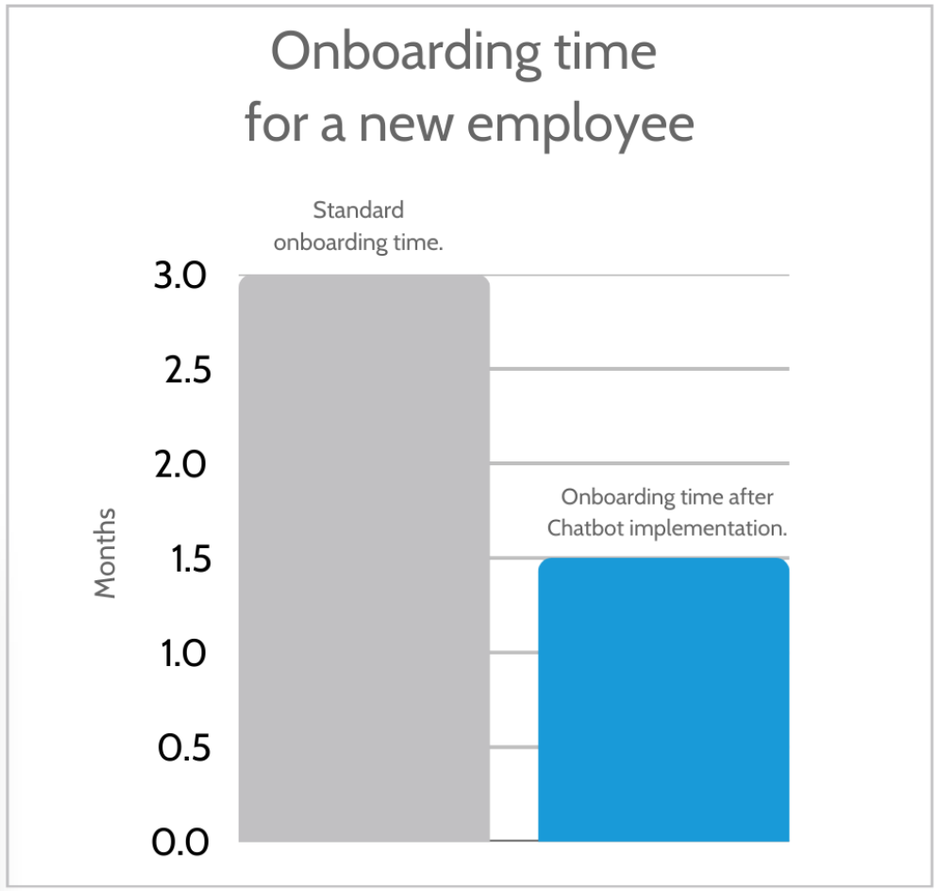


4 Achieved effects

The implementation significantly increased onboarding productivity, removing barriers to asking questions and making **new employees feel more confident in their roles.**

With **instant responses from the Chatbot**, the onboarding process was **accelerated**, leading to:

- **40% cost reduction** in onboarding
- **Onboarding time shortened from 3 months to 1.5 months**



50% shorter onboarding time for new employees in the organization.

4 Achieved effects

Additionally, the solution is **scalable** and can be **extended to other departments**, such as **customer support and incident management**. Thanks to AWS services and their optimal configuration, the system ensures **stability and security.**

This modern approach to GenAI integration has redefined the onboarding process, allowing mentors to focus on key organizational aspects rather than repetitive tasks.

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