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Case Study

AI-Powered Social Media Task Automation & Management System

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Introduction

“Yogine Solutions, a U.S.-based software development firm, required a centralized, AI-powered system to manage social media operations for internal and partner projects. Their marketing and development teams were struggling with inefficiencies caused by disconnected tools, manual workflows, and inconsistent reporting.

To streamline this, we built an AI-Powered Social Media Task Automation & Management System using the Microsoft ecosystem—combining low-code automation, intelligent content generation, and real-time analytics into a unified platform.

Business Challenges

01

Reliance on spreadsheets, emails, and manual task tracking made collaboration inefficient and error-prone.

02

Captions, hashtags, and tone varied widely across social platforms and lacked brand consistency.

03

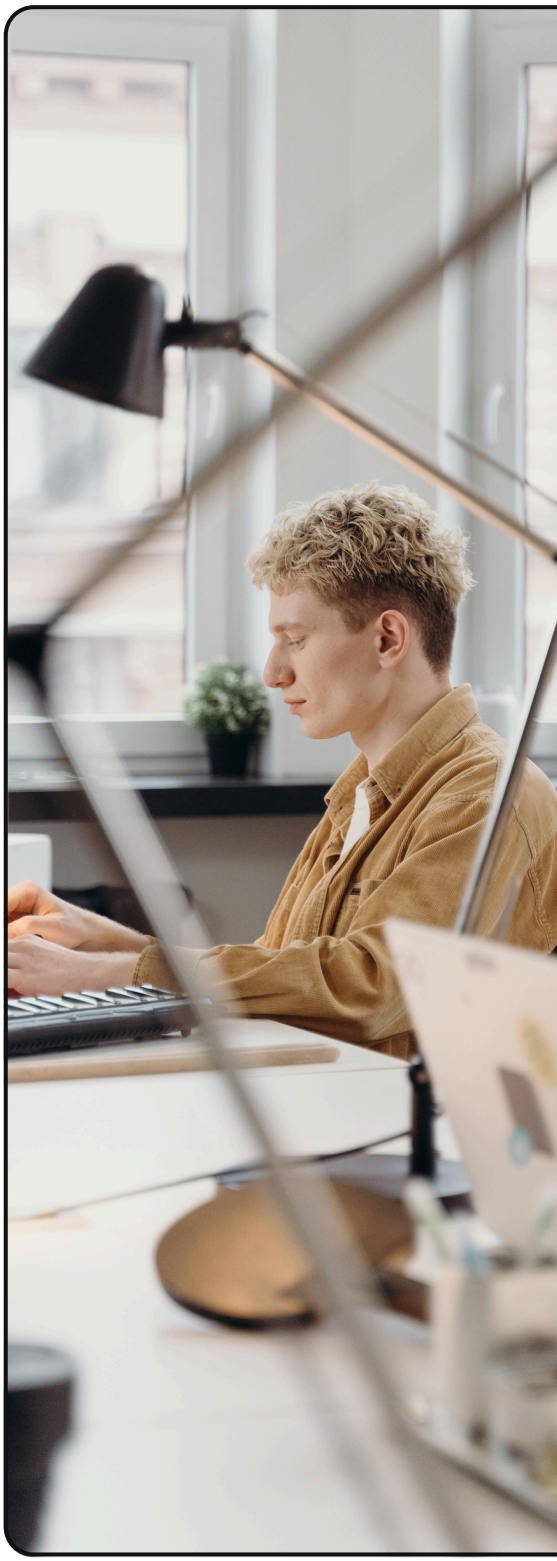
Scheduling content and getting stakeholder approval required back-and-forth communication without automation

04

Campaign performance reports were manually compiled, often taking hours each week.

05

The manual workflow model hindered scale-up opportunities for managing high-volume or time-sensitive content



Objective

01

Centralize content planning, collaboration, and publishing into a single platform.

02

Automate caption and hashtag generation using Azure OpenAI.

03

Enable multilingual, brand-consistent content across major platforms.

04

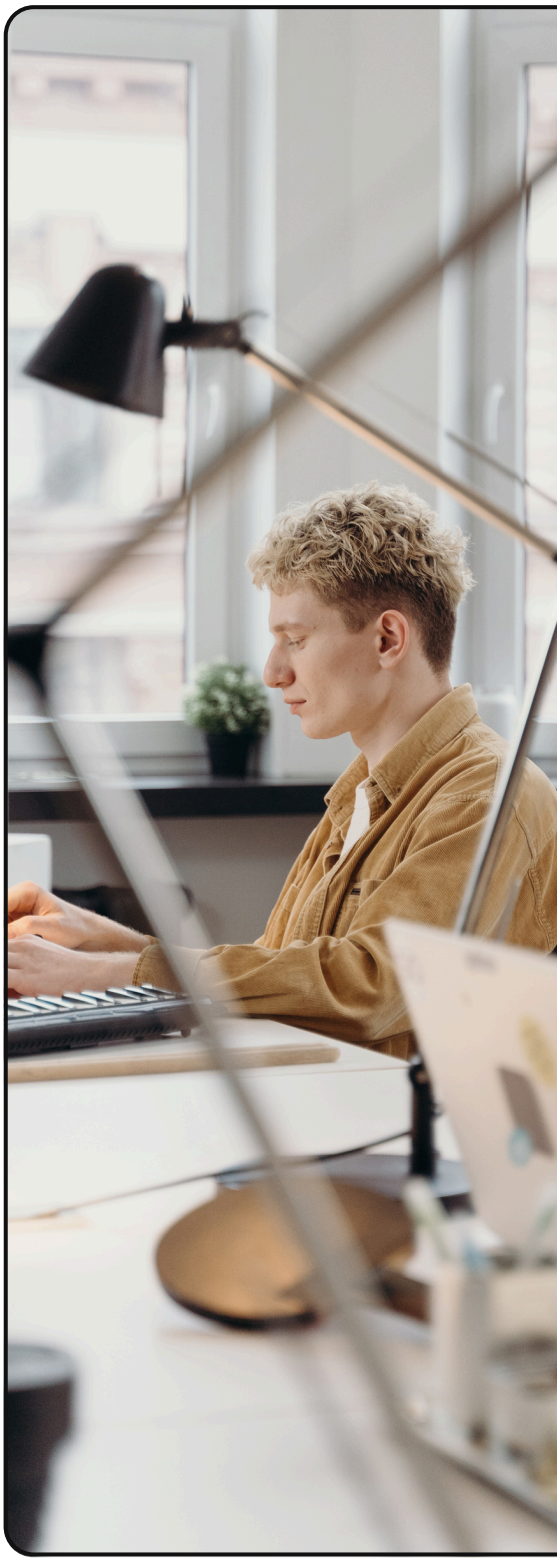
Integrate real-time reporting via Power BI Embedded.

05

Provide role-based access and workflow automation using Power Platform tools.

06

Reduce reporting time and operational overhead.



Solution Architecture

The proposed solution was architected using Microsoft Azure and Power Platform to ensure scalability, security, and extensibility.

Frontend

- Power Apps portal and model-driven apps for internal users and clients.

Automation

Power Automate workflows for content scheduling, task notifications, and approval flows.

AI Services

- Powered by Azure OpenAI. Supports tone variations, multilingual output, and platform-specific CTAs.·Azure OpenAI (GPT-4) for generating captions, hashtags.
- Azure ML for performance prediction.
- Azure Cognitive Services for tone and sentiment analysis.
- Azure Translator for multilingual generation.

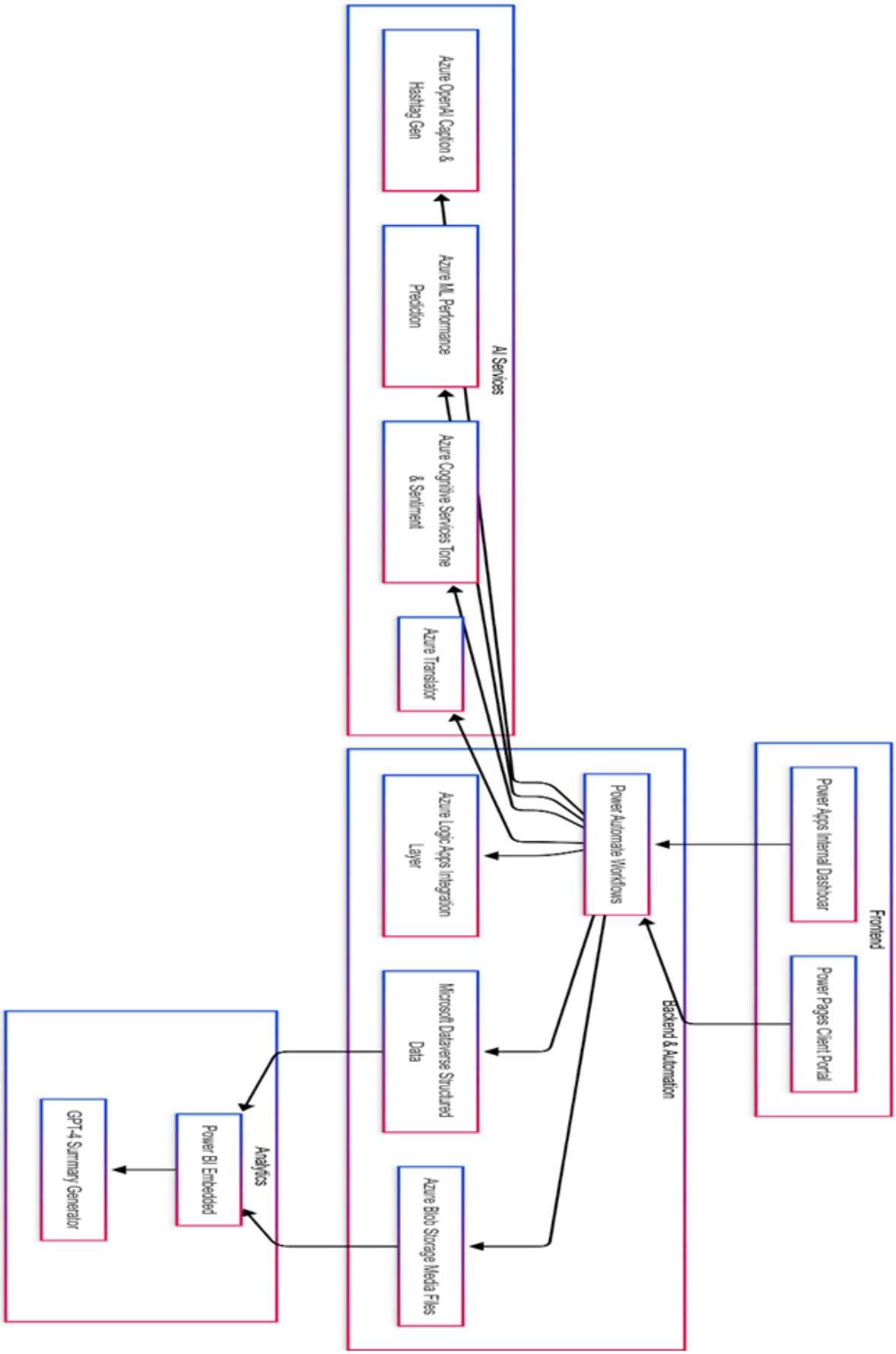
Analytics

Power BI Embedded dashboards with real-time insights and GPT-powered campaign summaries

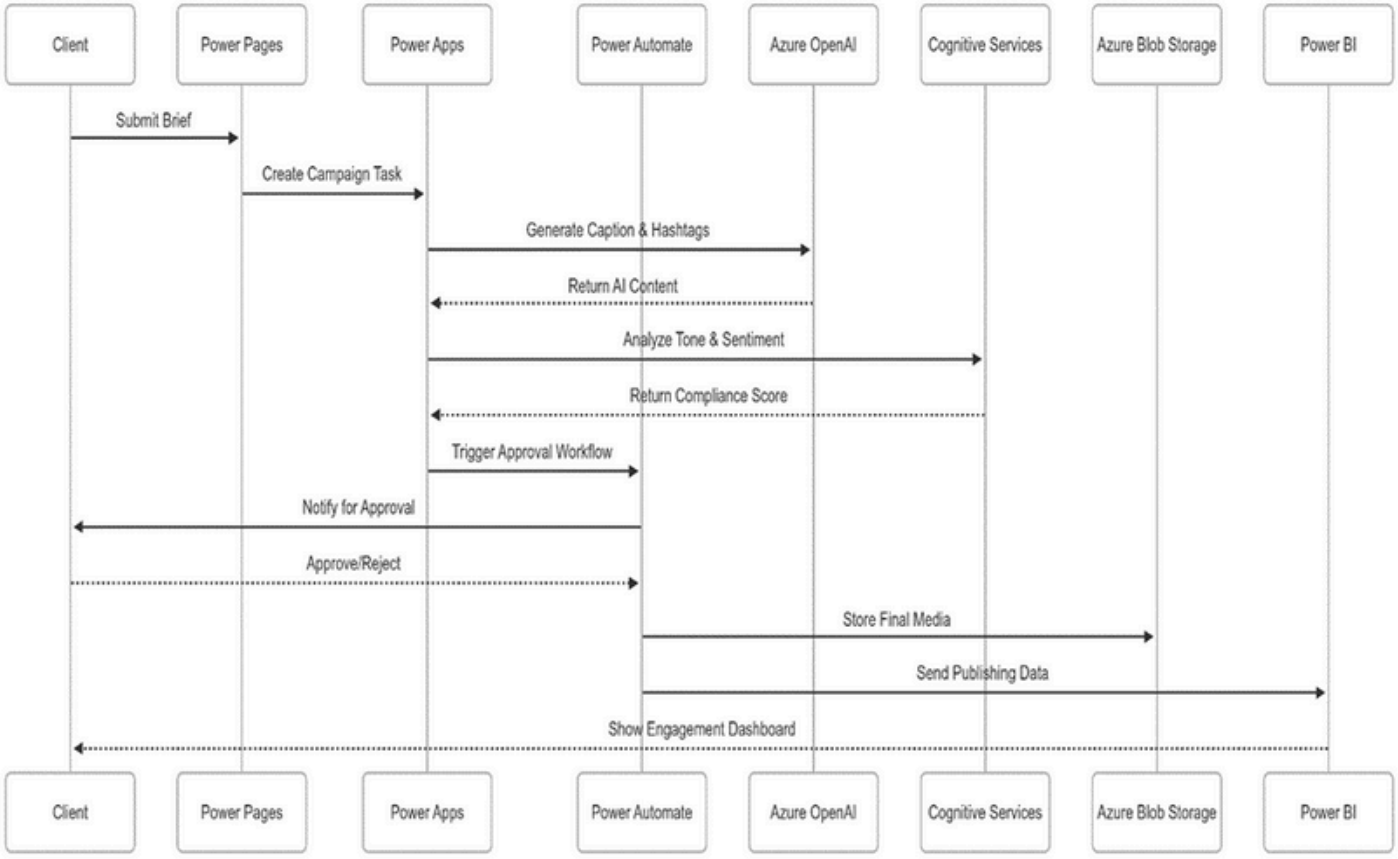
Storage & Integration

- Microsoft Dataverse for structured content and metadata.
- Azure Blob Storage for media files.
- Power Pages for client portal and briefs submission.
- Azure Logic Apps for connecting external services (e.g., social media APIs).

Solution Architecture Diagram



Data Flow Diagram



Key Functional Modules

Campaign Task Planner

- Use AI to auto-generate post outlines and captions. Users define goals, audience, and dates.

Content Calendar

- Drag-and-drop calendar interface for scheduling, status updates, and multi-platform planning.

Caption & Hashtag Generator

- Powered by Azure OpenAI. Supports tone variations, multilingual output, and platform-specific CTAs.

Conversational Assistant

- Built with Power Virtual Agents to answer internal queries (e.g., "Show pending tasks for week 2")

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Approval Workflow

- Power Automate-driven multistep workflows with Teams/email notifications and role-based task routing.

Brand Compliance Checker

- Tone, language, and compliance review using Azure Cognitive Services with real-time feedback.

Client Portal

- Power Pages-based interface for submitting briefs, approving content, and accessing reports.

Reporting & Insights

- Live analytics dashboards via Power BI Embedded. Auto-generated weekly reports via GPT-4.

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Timeline

Phase	Timeline	Key Milestones
Discovery & Planning	1 Weeks	Stakeholder workshops, process mapping, requirements
Architecture Design	0.5 Weeks	System blueprint, data models, workflow diagrams
Development Phase	4 Weeks	Power Apps, Automate workflows, caption AI, portal
AI Integration & UAT	2 Weeks	GPT tuning, approval flows, user testing
Deployment & Training	1.5 Weeks	Azure deployment, Power Platform go-live, user onboarding

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Results & Impact

Metric	Before Implementation	After Implementation
Average Content Cycle Time	3–5 business days	1.2 days
Rework Due to Tone/Compliance	25–30%	<8%
Client Satisfaction (Survey Score)	70%	94%
Time to Generate Reports	3 hours per campaign	<5 minutes
Task Coordination Errors	Frequent	Near Zero
Weekly Campaign Throughput	10	30