

Daily Motivation Email Automation - Case Study

Executive Summary

A simple, cost-effective Pipedream workflow delivers a daily motivational email by calling OpenAI's ChatGPT API using pre-built actions. This case study explains the problem, design decisions, implementation steps, challenges, results, and alternatives, highlighting automation, API integration, and cost optimization skills.

1. Context & Objective

Goal: Automate a daily motivational message to stay focused while studying for MS PL-300.

Audience: Self (first portfolio case study), prospective employers seeking evidence of practical automation, API, and cloud-service skills.

Constraints:

1. Zero or minimal cost.
2. Simple maintenance (no infrastructure overhead).
3. Email as the delivery channel.

2. Solution Overview

1. Scheduled Trigger (Pipedream): Fires daily at 9 AM PST.
2. Pre-Built ChatGPT Action (OpenAI via Pipedream): Sends a pre-defined prompt to OpenAI and receives a motivational message.
3. Email Delivery (Pipedream Email action): Message is sent via email with a dynamic subject line using the date.

Key Technologies:

- Pipedream (serverless workflow)
- OpenAI API (via pre-built Pipedream Action)
- Pipedream Email action (zero-cost delivery)

3. Detailed Implementation Steps

3.1 Define Requirements & Select Tools:

- Requirement: Daily motivational message delivered via email.
- Comparison: Twilio SMS rejected due to cost. Pipedream Email chosen.

3.2 Set Up Pipedream Workflow:

- Create workflow, add Scheduled Trigger (9 AM daily).
- Use OpenAI (ChatGPT) pre-built Action: add API key, define prompt.

3.3 Handle OpenAI Response:

- Response parsed automatically. No extra processing needed.

3.4 Send Email via Pipedream Email Action:

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- Subject: 'Daily Motivation for {{Month}} {{Day}}'
- Body: Output from OpenAI Action.

4. Challenges & Solutions

Challenge: Avoid Twilio costs Solution: Use free email delivery.

Challenge: Simplify API use Solution: Use Pipedream's ChatGPT Action.

Challenge: Dynamic subject lines Solution: Use Pipedreams date variables.

Challenge: Tone of message Solution: Refine OpenAI prompt.

5. Technology & Skills Demonstrated

- No-code/low-code automation: Used Pipedream pre-built actions.
- API integration: Leveraged OpenAI API via pre-built Action.
- Serverless architecture: No infrastructure to manage.
- Dynamic content: Customized email subject lines.
- Cost-conscious design: All services used were free.
- Debugging and iteration: Used Pipedream visual logs.

6. Results & Impact

- 100% delivery success over 30 days.
- Boosted motivation and consistency.
- Portfolio-ready example of automation with real impact.

7. Lessons Learned & Next Steps

- Prompt engineering improves response quality.
- Pre-built actions = fast deployment, real value.
- Extendable: Can support multi-user, add logs or message history.

8. Alternative Approaches & Trade-Offs

Twilio SMS: Immediate delivery, but expensive.

Email via Pipedream: Free, reliable, simple.

Final Decision: Email via Pipedream best suited this use case.

9. Conclusion

This automation project demonstrates the ability to design efficient, scalable, no-cost solutions with visible outcomes. It's aligned with roles requiring technical creativity, automation, and problem solving.