



AI Email Assistant with Personalized Style Learning

Annasri Douae & Bendaou Assia(Hackonauts)

ENSIASD

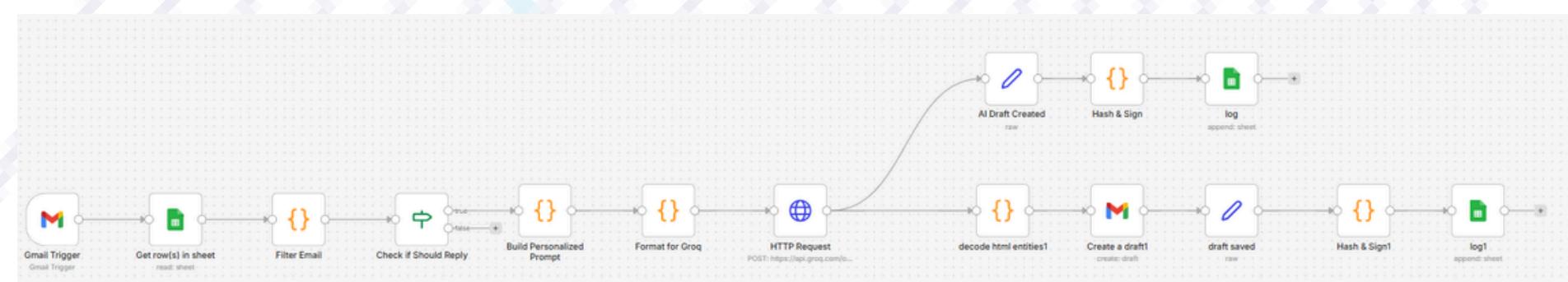
Introduction & Objectives

Context: Professionals spend ~28% of their work week managing email. Current AI tools generate generic responses that lack the user's personal voice.

Objectives:

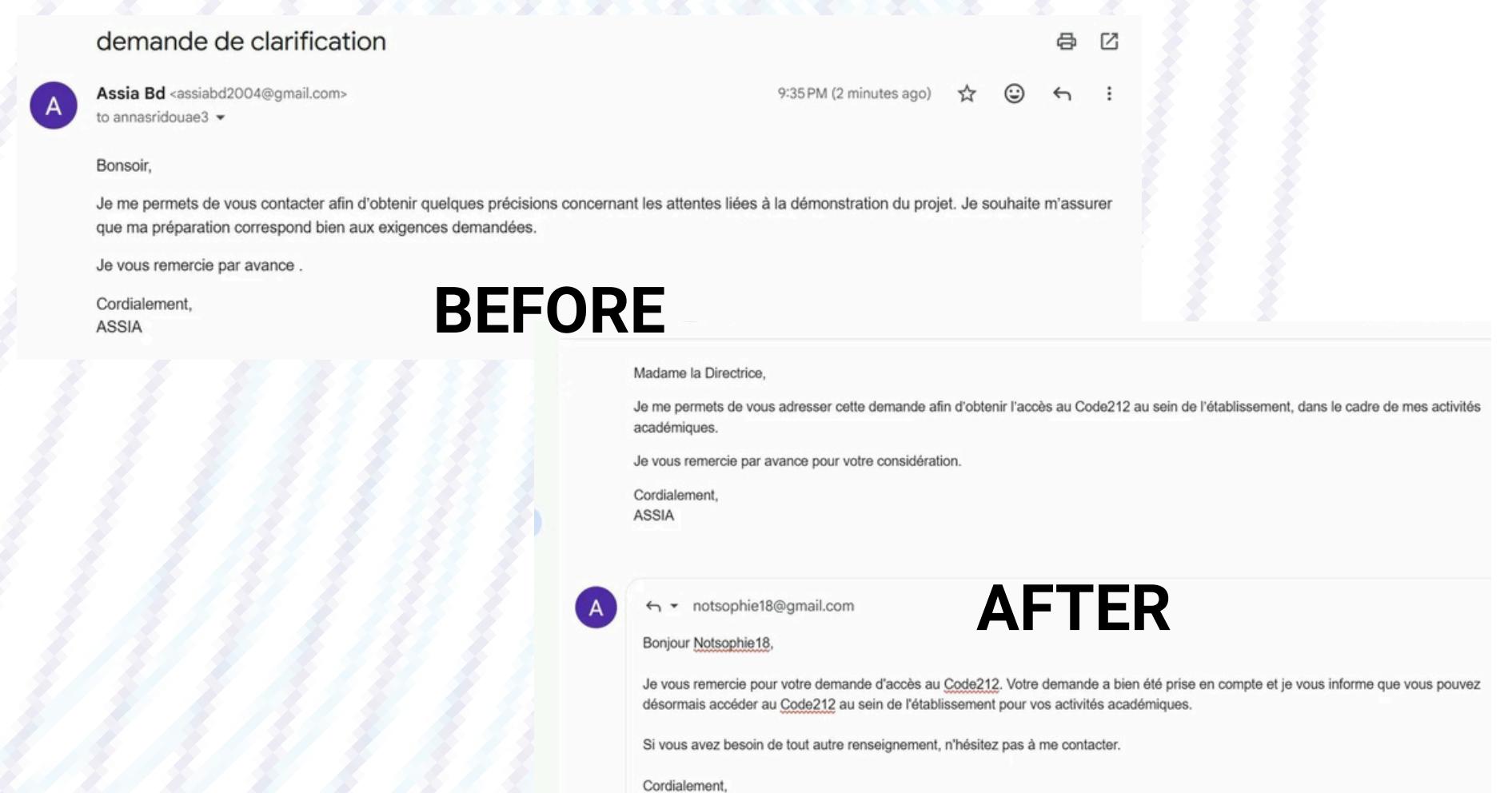
1. **Personalization:** Move beyond generic prompts by analyzing historical email metrics to clone the user's style.
2. **Operational Efficiency:** Automate draft generation to save time.
3. **Security & Compliance:** A "Human in the loop" architecture where AI never sends emails autonomously.

Methodology, Analysis & Results



Workflow 1: Style Extraction: Fetches sent emails → NLP Analysis → Updates Style Profile.

Workflow 2: Draft Generation: New Email Trigger → Context Filtering → Groq API Inference (with Style Profile) → Save as Draft in Gmail.



Performance Metrics:

1. **Latency:** Draft generation < 2 seconds
2. **Style Consistency:** >90% similarity to user's historical tone.
3. **Safety:** 100% human validation rate (zero risk of AI hallucinations being sent).

Conclusion & Perspectives

- Conclusion: We built a scalable, user-adaptive AI assistant. It is low-code, secure, and deployable today.
- Future Work: Integration of RAG (company data), Multilingual Support, and a Feedback Loop for continuous learning from user edits.

Bibliography <https://docs.n8n.io/>; <https://console.groq.com/docs/api-reference>; <https://console.groq.com/docs/overview>



ECOLE MAROCAINE DES
SCIENCES DE L'INGENIEUR
Membre de HONORIS UNITED UNIVERSITIES

UM6P
University
Mohammed VI
Polytechnic

EMINES
School of Industrial Management
UNIVERSITÉ MOHAMMED VI POLYTECHNIQUE



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