**Automated Cold Email Pipeline for Batch Outreach and Reply Tracking**

**Project Overview**

This repository provides an automated, scalable solution for personalized cold email outreach to HR contacts. It is tailored to candidate job applications, tracks each email and response, and sends emails in controlled batches—maximizing send success and minimizing spam risk. The system integrates seamless Gmail API automation, resume attachment, and Excel-based logging for transparency and follow-up.

**Features**

* **Batch Sending:** Emails are sent to HR contacts in daily batches (configurable, default 65/day), preventing Gmail block/flag issues.
* **Dynamic Personalization:** Each email includes a dynamic, company-specific line demonstrating research and role-relevance.
* **Smart Reply Tracking:** Before sending to any HR, it checks your Gmail inbox for replies and logs them, skipping further outreach to respondents.
* **Centralized Logging:** The Excel file (hr\_contacts.xlsx) is your single truth for contacts, status, and replies—eliminating duplicate outreach or missed responses.
* **Attachment Handling:** Automatically attaches your resume from the correct folder, maintaining a professional presentation.
* **Easy Configuration:** Adjust batch size or project structure to fit campaigns of any scale.

**Project Structure**

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cold\_email\_pipeline/

├── batched\_email\_pipeline.py # Main batch send + reply check script

├── hr\_contacts.xlsx # Central log of contacts, tracking, & statuses

├── resume/

│ └── Shashwat Patkar Resume.pdf # Resume to attach in each email

├── credentials/

│ ├── credentials.json # Gmail API credentials

│ └── token.json # Gmail API user token (created on first run)

├── venv/ # Python virtual environment (not versioned)

**How It Works**

**1. Preparation**

* Place your HR contacts in hr\_contacts.xlsx (columns: Name, Email, Company Name, Personalized Line, Status, Reply).
* Save your resume in the resume/ folder.
* Insert your Gmail API OAuth credentials in the credentials/ folder.

**2. Daily Operation**

* On execution, the script:
  + Determines the daily batch (based on the total contacts and batch size).
  + For each contact in today’s batch:
    - Checks if a reply is already present in your Gmail inbox (logs if so).
    - If no reply and email not previously sent, dynamically generates a personalized line and sends the email with your resume attached.
    - Updates the Excel log with send status and reply state.
* Log and skip any HR who has replied or already received your email.

**3. Flexibility**

* The BATCH\_SIZE can be changed for faster/slower campaign pacing.
* You can re-run daily: each run processes a fresh, non-overlapping batch (rolling over on completion).

**Example Usage**

1. Clone/download the repo and navigate to cold\_email\_pipeline/.
2. Activate your virtual environment:

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.\venv\Scripts\Activate

1. Install dependencies:

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pip install pandas openpyxl google-auth google-auth-oauthlib google-api-python-client

1. Run the automated pipeline:

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python batched\_email\_pipeline.py

**Key Functions (batched\_email\_pipeline.py)**

* **Gmail Authentication:** Securely leverages Gmail API for all email and inbox operations.
* **Send-Check Cycle:** Smart dual logic: check for reply, then send if appropriate.
* **Excel Logging:** Updates “Status” and “Reply” per HR automatically.

**Sample hr\_contacts.xlsx Structure**

| **Name** | **Email** | **Company Name** | **Personalized Line** | **Status** | **Reply** |
| --- | --- | --- | --- | --- | --- |
| Jane HR | [jane@company.com](mailto:jane@company.com) | ABC Ltd |  |  |  |

* **Status:** ✅ if email sent.
* **Reply:** ✅ if reply received (auto-checked, not by user).

**Adaptation & Extensibility**

This solution is suitable for any automated batch pipeline requiring both role-specific personalization and transparent tracking—job outreach, client prospecting, speaker invitations, etc.

**License**

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**Contribution**

Suggestions, pull requests, and issue reports are welcome! Please fork this repository and propose changes as needed