**Resume Automation System**

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**1. Introduction**

The **Resume Automation System** is a fully automated solution designed for HR and recruitment teams to streamline resume processing. The system automatically fetches resumes from emails, extracts relevant applicant details, uploads them to Google Drive, and stores structured data in Google Sheets. Additionally, it sends HR notifications and provides a user-friendly Streamlit dashboard for managing applicants.

**Key Benefits:**

Saves time by automating resume collection and processing.  
Reduces human errors in data entry.  
Provides a centralized repository for resumes and applicant data.

**2. System Features**

| **Feature** | **Description** |
| --- | --- |
| Fetch Resumes | Automatically downloads resumes from Gmail. |
| Save Locally | Stores resumes (PDF/DOCX) in ./Resumes/ folder. |
| Upload to Drive | Checks for duplicates before uploading. |
| Extract Data | Extracts **Name, Email, Phone** from resumes. |
| Store in Google Sheets | Saves structured applicant data. |
| Email Notification | Sends HR an email when a new resume is added. |
| Streamlit Dashboard | Search, view, and download applicant details. |
|  |  |

**3. Technologies Used**

* **Python 3.8+** – Core programming language.
* **Google Cloud APIs** – Drive & Sheets integration.
* **IMAP (Email Fetching)** – Fetching emails from Gmail.
* **Streamlit** – Interactive HR dashboard.
* **Regex (Regular Expressions)** – Extracting names, emails, and phone numbers.
* **pdfplumber** – Parsing PDF resumes.

**4. Folder Structure**

Resume-Automation/

│-- Resume/ # Downloaded resumes (PDF/DOCX)

│-- final.py # Main automation script

│-- dashboard.py # Streamlit Dashboard

│-- credentials.json # Google API Credentials

│-- requirements.txt # Python dependencies

│-- README.md # Documentation

**5. Installation Guide**

**Step 1: Clone the Repository**

git clone https://github.com/snehbhagat/Resume-Automation

cd Resume-Automation

**Step 2: Install Dependencies**

pip install -r requirements.txt

**Step 3: Set Up Gmail API & Google Drive API**

* Enable **IMAP Access** in Gmail
* Generate a **Google App Password**
* Enable **Google Drive & Sheets API** in Google Cloud Console.
* Download credentials.json from Google Cloud Console and save it in the project folder.

**Step 4: Add Your Credentials**

Create a .env file or update the script with:

EMAIL\_USER="your-email@gmail.com"

EMAIL\_PASSWORD="your-app-password"

GDRIVE\_FOLDER\_ID="your-google-drive-folder-id"

SHEET\_ID="your-google-sheet-id"

**6. Code Explanation**

**Fetching Resumes from Email**

* Uses **IMAP** to connect to Gmail and fetch unread emails with resumes.
* Searches for emails from the last **2 days** to avoid processing old emails.

**Downloading & Saving Resumes**

* Extracts **PDF/DOCX attachments** and saves them in ./Resumes/ folder.

**Uploading to Google Drive**

* Uses Google Drive API to **upload resumes** to a specific folder.
* **Checks for duplicate files** to avoid re-uploading.

**Extracting Applicant Details**

* Uses **pdfplumber** (for PDFs) and regex to extract **Name, Email, Phone Number**.

**Storing Data in Google Sheets**

* Appends new applicant data to **Google Sheets** for HR access.

**Sending Email Notifications**

* Sends an **email to HR** when a new resume is successfully processed.

**Streamlit Dashboard**

* Displays all applicants in an interactive **web interface**.
* Allows **searching, filtering, and downloading** applicant data.

**7. How the Automation Works**  
1. It **fetches new resumes** from unread Gmail messages.  
2. Extract **applicant details** (Name, Email, Phone).  
3. Saves the resume in **Google Drive**.  
4. Adds applicant data to **Google Sheets**.  
5. **Sends an email notification** to HR.  
6. HR can view resumes in the **Streamlit Dashboard**.

**8. Future Enhancements**

* Store extracted details in a structured database (PostgreSQL, Firebase, etc.).
* Deploy to a cloud server (AWS, Google Cloud, Heroku) for 24/7 automation.
* Improve resume parsing with NLP for better name and contact detection.

**9. Conclusion**

This system provides a seamless, automated workflow for resume collection, processing, and management. By integrating **email, Google Drive, Google Sheets, and a dashboard**, HR teams can streamline recruitment with minimal manual effort.