End-to-End Automated Employee Onboarding System Using UiPath
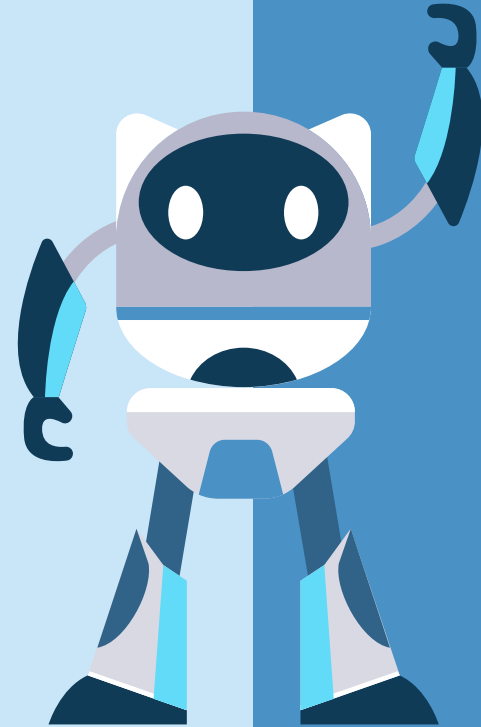
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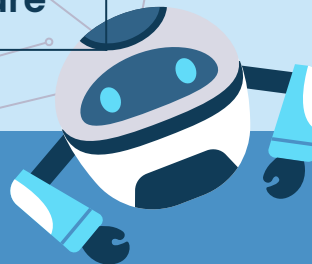
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Tech stack used and the complete automation flow—from resume intake to offer letter distribution.

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Process Implementation Stages

Detailed steps including resume screening, assessment filtering, interview updates, and offer letter generation.

04

Results, Challenges & Future Scope

Project outcomes, obstacles encountered, and potential improvements to enhance automation further.

Introduction

HR onboarding is often repetitive, manual, and time-consuming, leading to inefficiencies in the hiring process. These tasks are prone to human error and delays, affecting overall productivity. Automating the workflow helps streamline operations, saving time and improving accuracy.

Aim: Build a fully automated workflow using RPA (UiPath) to streamline the hiring process from resume screening to offer letter distribution.
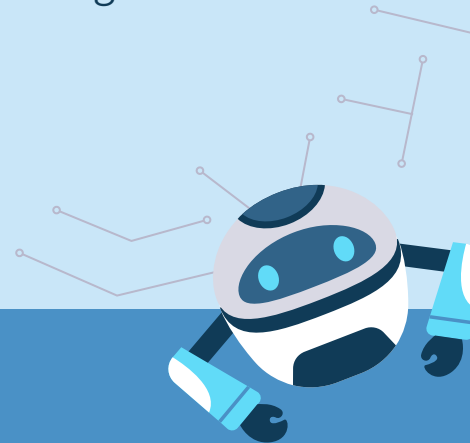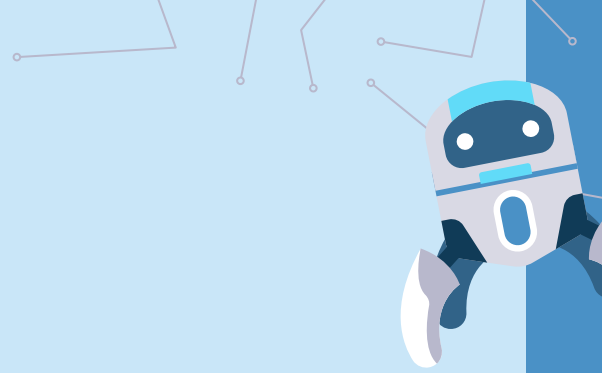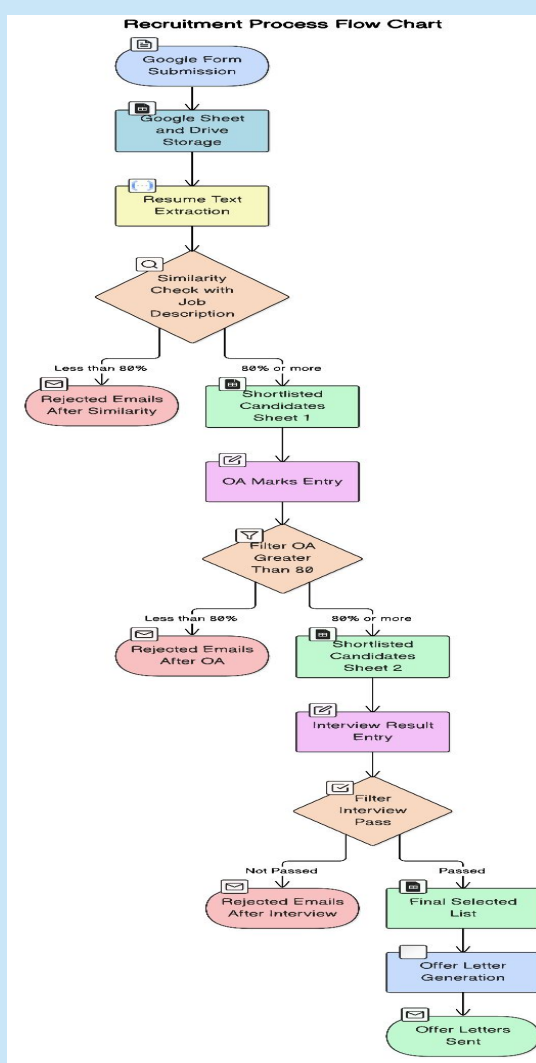
Tools & Technologies Used

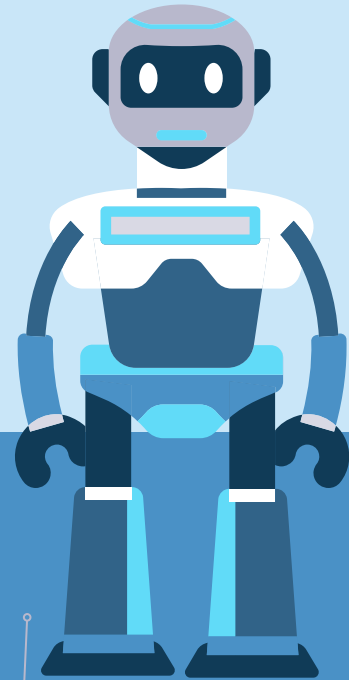| Tool	Description
UiPath	Core RPA automation
Google Drive	Resume storage & retrieval
Google Forms	Resume submission
Google Sheets	Dynamic data handling
Gmail API	Automated email responses
Google Docs	Dynamic offer letter template

Diagram

Recruitment Process Flow Chart
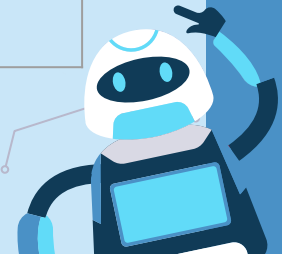
01

Step 1 –Google Form Creation
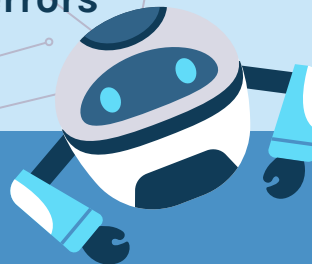
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Google Form Creation

Google Form Creation via UiPath
- Open Chrome → Navigate to Google Forms (Use Browser + Type URL)
- Click → Add Form Elements (Click IMG, Multiple Choice, Short Answer)
- Type Into → Input fields like Full Name, College Email, Resume Link
- Click → Publish and Dismiss confirmation popup

📄 Effort: Field automation with Clicks and Typing actions
⚡ Impact: Speeds up form creation, ensures consistency, reduces manual errors
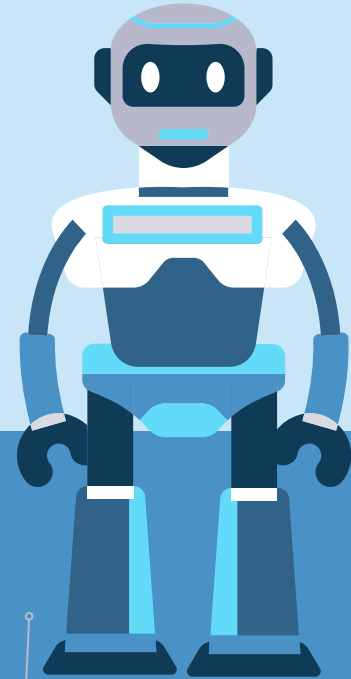
Step 2 – Resume Screening Automation

02

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Resume Screening Automation

- Data submitted via Google Form, resumes auto-uploaded to Google Drive
- UiPath reads resumes → extracts text using OCR
- Compares with Job Description using text similarity
- Candidates with similarity > 80% are shortlisted
- Gmail sent to selected and rejected applicants

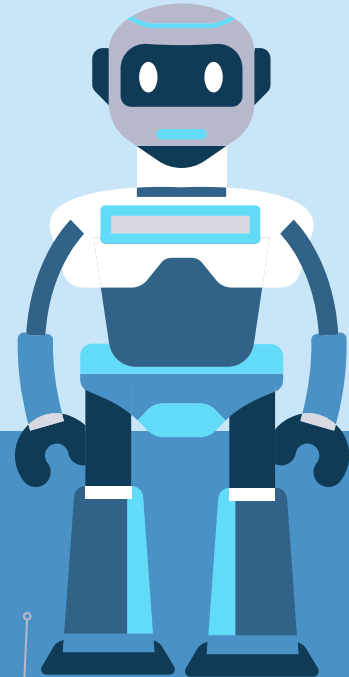📄 Effort: Text extraction, JD matching logic, threshold filtering
✉️ Impact: Automated screening = reduced HR workload
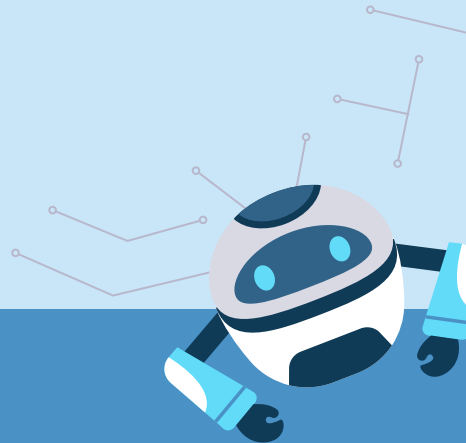
Step 3 – Online Assessment Processing

**03**

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Online Assessment Processing

- New Google Sheet with shortlisted resumes created
- OA scores manually entered (from 3rd-party test provider)
- UiPath filters scores > 80%
- New sheet created for next round
- Gmail sent to both passed/failed candidates

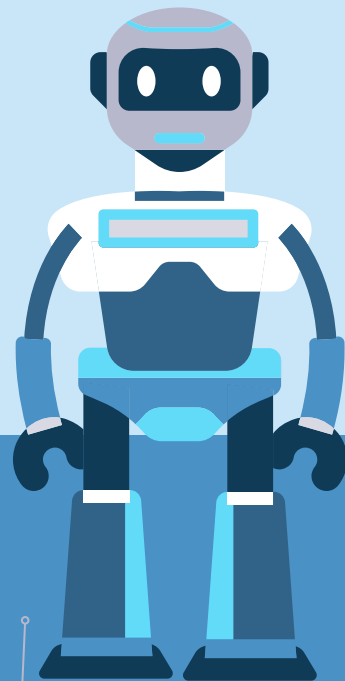📊 Effort: Data filtering logic, dynamic Google Sheet creation

📧 Impact: Timely communication, accuracy in filtering
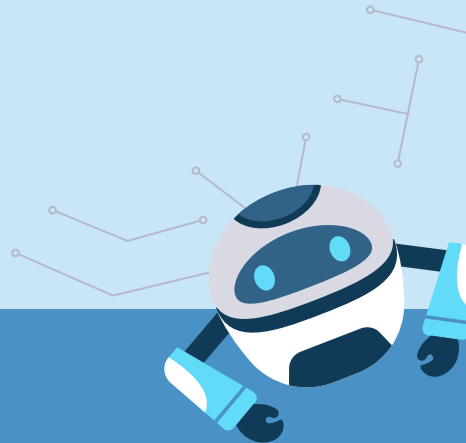
Step 4 – Interview Round Automation

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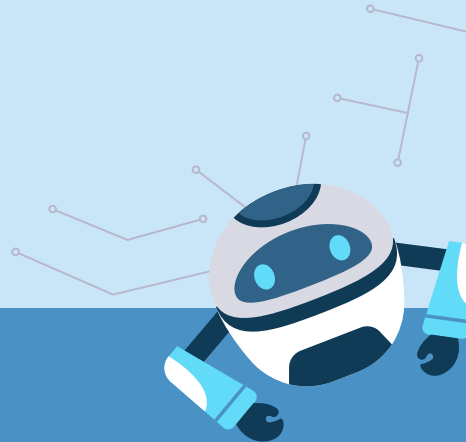
04

Interview Round Automation

- HR adds a column: Interview Selection (1/0) manually
- UiPath filters final list of selected candidates
- Again, sheet created with selected applicants
- Gmails sent using conditional triggers
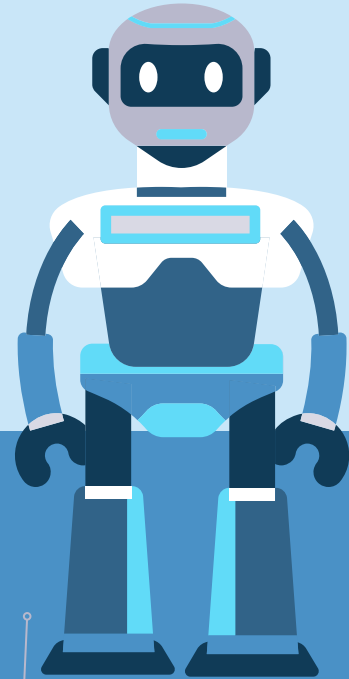
🛠️ Effort: Manual + automated collaboration
✅ Impact: Final candidate pipeline ready without human errors

Step 5 – Offer Letter Distribution

05

You can enter a subtitle here if you need it

Offer Letter Distribution

- Final Google Sheet with selected candidates + emails
- UiPath generates offer letter PDFs using Google Docs Templates
- Candidate name dynamically inserted
- PDFs emailed to selected candidates via Gmail

📄 Effort: Google Docs template automation
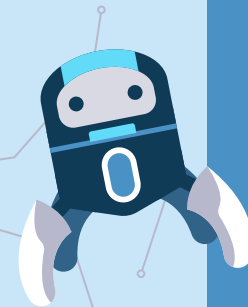✉️ Impact: Personalized offer letter delivery, no manual work
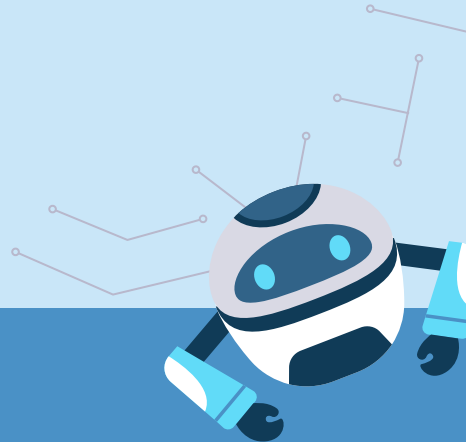
Key Features

🔁 Fully End-to-End Automated (except 3rd party OA & interview marking)

🧠 NLP-based resume parsing

⏱️ Saves time and resources

📊 No technical knowledge needed for HR to use the flow

📫 Automated, personalized Gmail communication

Challenges Faced

📝 Extracting text accurately from multiple resume formats
Different file types (PDF, DOCX) and layouts made consistent extraction difficult.

📫 Gmail quota limits
UiPath had to implement batch email sending logic to avoid daily Gmail sending limits.

📊 Handling manual data with automation (e.g., OA scores, interview results)
Seamlessly integrating manual steps with automation without causing flow errors.

🧾 Ensuring no data overwrites in Google Sheets
Needed careful sheet duplication and naming conventions to preserve every stage.

📂 Dynamic file and folder handling on Google Drive
Automating resume access and ensuring file names matched form entries was tricky.

🧠 Similarity score logic for JD matching
Designing an accurate and fair threshold-based comparison system required fine-tuning and testing.
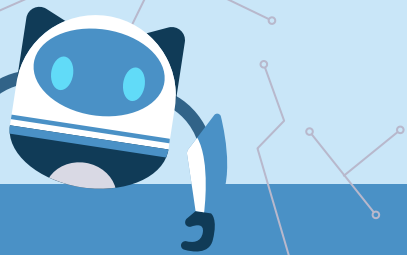
Results

- Automated screening of 50+ resumes in under 2 minutes

- 100% accuracy in Gmail responses and shortlisting

- Personalized offer letters sent without manual edits

- Saved approx. 80% HR effort in onboarding process

Future Enhancements

🔐 Add security/authentication for HR users

📦 Integrate with ATS (Applicant Tracking System)

🧪 Auto-grade online assessment using MCQ forms

🤖 Add chatbot for live candidate queries

Conclusion

"The system built demonstrates how Robotic Process Automation can revolutionize traditional onboarding methods. By using UiPath and Google Workspace tools, a seamless, end-to-end onboarding pipeline was developed and tested."

 Real-world practical use
Highly scalable
 Time-saving and reliable

Thanks!

Do you have any questions?