



Internal CV conversion tool

Intelligent document standardization automation with Generative AI.

Industry: **Technology and consulting services**

*Image for illustrative purposes only

Summary

Novacomp developed a serverless solution on AWS to automatically standardize CVs received in different formats into a uniform corporate template.

Users simply send their CV by email and receive the standardized Word document in return — with no manual intervention — thanks to an architecture combining Amazon Bedrock, Claude, and multiple AWS services.

Main challenges

- CVs arrived in multiple formats with heterogeneous structures, making it difficult to manage and present them consistently to clients.
- The manual standardization process consumed significant time from the Talent Acquisition team without guaranteeing consistent results.
- It was necessary to automatically detect and respect the CV language (Spanish or English) without performing unsolicited translations.
- The solution needed to handle errors in a controlled manner and notify senders in cases of invalid files or insufficient content.
- The infrastructure had to be deployed as code (IaC with Terraform) in an automated, repeatable, and versioned way.

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Approach

Novacomp executed the project in two phases, first building a testing environment and then taking the solution to production with infrastructure as code. The approach included:

- **Intelligent content extraction**, using Amazon Textract for PDFs and python-docx for Word files, covering the most common CV formats received.
- **Generative AI structuring**, calling Claude via Amazon Bedrock to transform extracted text into a standardized JSON with the candidate's information.
- **Automatic language detection**, selecting the correct corporate template (Spanish or English) without unsolicited translations or inferences.
- **Orchestrated flow with SES and SQS**, decoupling email reception from processing, with automatic retries for transient errors and notifications for permanent ones.
- **Automatic final document generation**, producing the standardized .docx with docx-mailmerge and delivering it by email to the sender without manual intervention.
- **Infrastructure as code with Terraform**, ensuring automated, repeatable, and versioned deployment in the NovaTalent production environment.

Results

- Full automation of the standardization workflow, eliminating manual intervention from the Talent Acquisition team.
- Multi-format (PDF and Word) and multilingual (Spanish and English) support with automatic language detection.
- Robust error handling: automatic retries for transient errors and email notifications for permanent failures.
- Processing time reduced to minutes from email receipt to delivery of the standardized CV.
- 100% serverless infrastructure managed with Terraform, ensuring automatic scalability and deployment repeatability.

Technologies used

Amazon Bedrock (Claude)	Amazon Textract
Amazon SES	Amazon SQS
AWS Lambda	Amazon S3
Terraform (IaC)	python-docx
docx-mailmerge	AWS Cloud9
Amazon Linux 2	Python 3.12



Conclusion

The **Internal CV Conversion Tool** is a concrete example of document workflow automation with Generative AI that delivers direct operational value.

By combining Amazon Bedrock, Claude, and a serverless architecture orchestrated with SES, SQS, and Lambda, Novacomp transformed a manual, error-prone process into a fully automated, scalable, and reliable workflow — laying the groundwork for similar solutions aimed at external clients.

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