Using Machine Learning on AWS to automate PPP loan origination

aws financial services

The US Paycheck Protection Program is driving a need for accelerated document processing

The second round of the Paycheck Protection Program (PPP) is designed to help small businesses provide additional relief to their employees and businesses. Similar to the first round, businesses fill out a loan application and provide several supporting financial documents for approval. The application process can be challenging to many lenders due to the volume of applications they receive and the number of pages per submission.

The US Paycheck Protection Program is a Small Business Administration (SBA) initiative that helps businesses keep their workforce employed during COVID-19. This program requires US small businesses to fill out a multi-page application and submit various financial records to lenders and banks.

AWS customers are accelerating PPP lending by using ML on AWS

Using Machine Learning, several AWS customers have automated the loan approval process, reducing approval times from days to hours and accelerating the delivery of much-needed funds to millions of small businesses.

Kabbage

Kabbage is a data and technology company providing small business cash flow solutions, including access to flexible lines of credit, online payments, cash-flow insights and business checking accounts. Read the Kabbage blog for more details.

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> Amazon Textract helped us support 80% of PPP applicants to receive a fully automated lending experience and reduced approval times from multiple days to a median speed of 4 hours. By the end of the program, we became the second largest PPP lender in the nation by application volume, surpassing major US banks — serving over 297,000 small businesses, and preserving an estimated 945,000 jobs across America.
>
> **Anthony Sabelli**
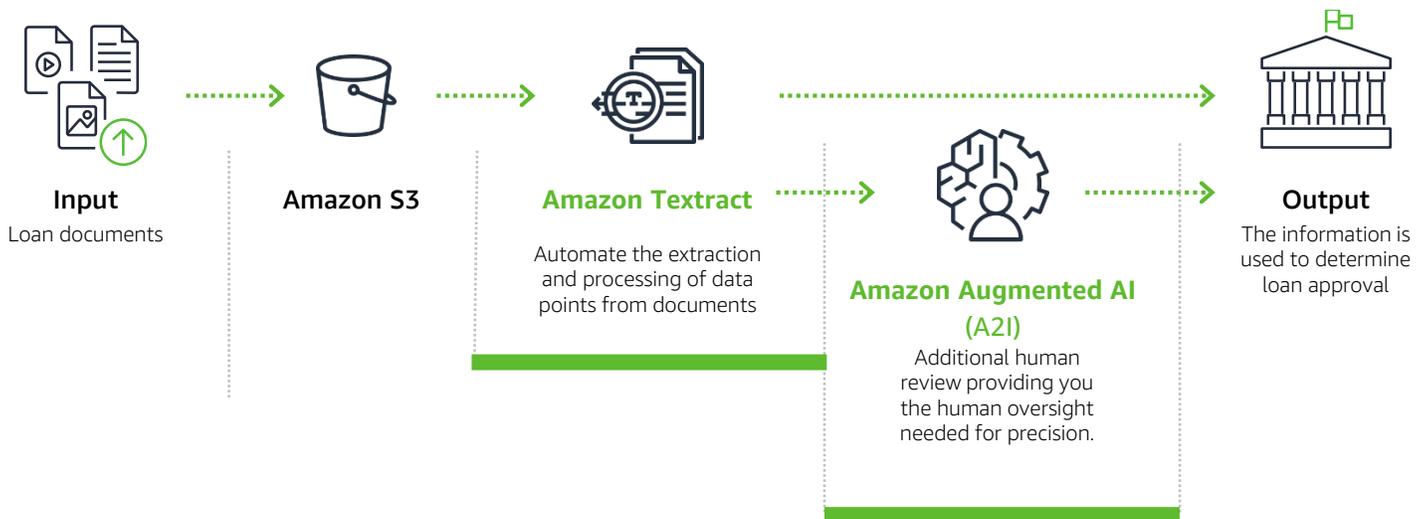> Head of Data Science, Kabbage

BlueVine

BlueVine's online platform provides business owners with fast and easy solutions to everyday financial needs. BlueVine harnessed Amazon Textract to achieve a high degree of automation for document processing, helping thousands of businesses across the US receive funds as part of the PPP program, and saving more than 400,000 jobs. Read the BlueVine blog for more details.

How does AWS help organizations process PPP loans using Machine Learning?

AWS ML services can save you time and money by automating the extraction of relevant data points from documents and building workflows to ensure proper oversight. These services can help you process applications more quickly and improve the overall underwriting process.

Sample document processing flow:

Input
Loan documents

Amazon S3

Amazon Textract

Automate the extraction and processing of data points from documents

Amazon Augmented AI (A2I)
Additional human review providing you the human oversight needed for precision.

Output
The information is used to determine loan approval

AWS offers several services that customers can use together or individually to form a document processing solution:

Amazon Textract	Amazon SageMaker	Amazon Comprehend	Amazon Augmented AI
Extract printed text, handwriting, forms, and tables from virtually any document using OCR to eliminate manual processes. This allows you to process PPP forms, in English and Spanish, in an automated way which enables you to process loan applications quicker.	Helps you build, train, and deploy ML models for virtually any use case including building custom models for text extraction and analysis so you can quickly process print, handwritten, and electronic documents, such as PPP loans.	Extracts relevant details, insights, relationships from text and categorizes documents using natural language processing (NLP). You can isolate the information needed and classify supporting documents like financial statements submitted with your PPP loan application.	Makes it easy to build the workflows required for a human to review the output from any ML or AI service, providing you the human oversight needed for precision. Human verification of these forms drives compliance with the PPP and finance laws.

Get started automating PPP applications with Machine Learning on AWS today

1 Watch a demo to learn how to quickly implement AWS Machine Learning into your PPP lending workflow

2 Start implementing Amazon Textract code samples to meet the demands of PPP loan applicants

3 Engage AWS Partners to accelerate your use of Machine Learning on AWS

4 Contact us for more information on ML solutions for your organization

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