



GemCap makes loans ranging from \$1 to \$10 million to businesses in the United States and Canada, as well as in-transit inventories on their way to the United States. Customers can get revolvers, term loans, and factoring from the company. They pride themselves on a unique, flexible, and solutions-based lending products tailored to their clients. Their mission: providing clients with great financing solutions and awesome customer service.

## CHALLENGE

**High Resource Costs:** Companies that make loans must analyze and record borrowers' financial statements. Traditional methods of document processing rely on staff members manually handling data. This entails allocating resources to data entry of borrower statements such as tax forms, balance sheets, and income statements. Data is typically available in a variety of formats, such as scanned PDF or Excel.

**Slow Process:** Such data entry requires extensive use of human resources and takes a lot of time. Prior to entering complex data, it must be understood. As a result, manually entering data for each borrower's balance sheet and income statement for a year can add to substantial time backlogs and resources overhead.

**Error Prone Processes:** When a large company has hundreds or thousands of corporate borrowers, the tasks become more susceptible to human entry errors, resulting in delays in providing the most up-to-date information to loan officers.

**Low Employee Morale:** High error rate and repetitive tasks lower the morale of the staff who are working on the data entry team. This will lead to higher attrition within the team. Understaffed teams will exacerbate the problems with low morale.

**Inability to Scale up Reliably to Meet Customer Demand:** It takes time to increase data entry resources to meet rising demand. Growing businesses experience choke points due to manual data entry. This will cause problems with rapidly scaling up operations to suit the business, leading to an irreparable loss of customers and revenue.

## SOLUTION

Idexcel used Machine Learning (ML) algorithms running on the AWS suite of products and services to implement a solution that would extract data from multiple types of files. The solution goes beyond data extraction by mapping the extracted information to the appropriate time period (such as fiscal year, quarter) and corresponding financial accounts (for example cash, depreciation, etc.).

The user uploads the desired file and chooses the time period of the data that is required to be extracted. The system intelligently identifies the correct information and maps the account names to the values.

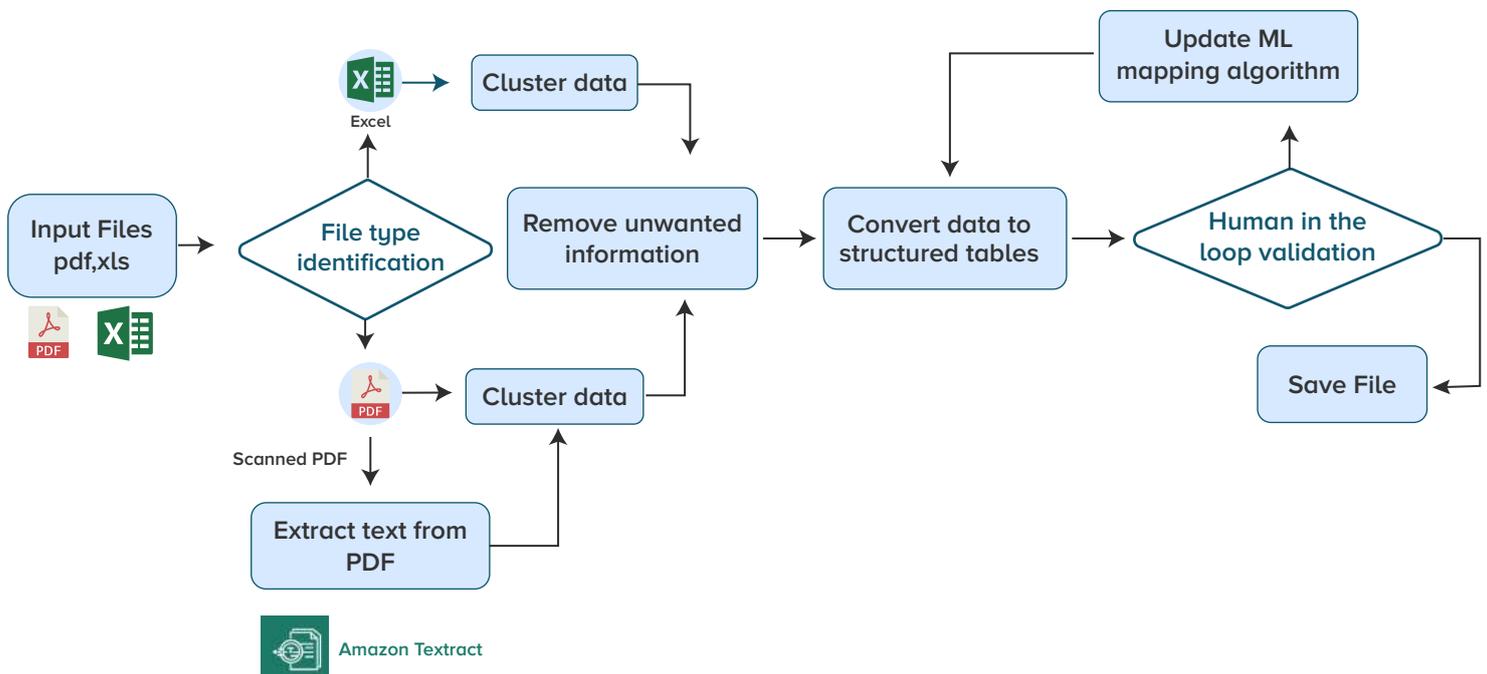
### AWS Products and Services:

Idexcel's AWS experience and certification as an APN Partner enabled the deep integration of AWS products and services into the solution. List of the AWS products that are utilized to execute the solution are:

1. AWS Secure API Gateway
2. AWS Lambda Serverless Computing
3. Amazon SQS Queue Service
4. Elastic Load Balancing
5. Amazon Elastic Compute Cloud
6. Amazon Elastic Container Service
7. Amazon Elastic Container Registry
8. Amazon Elastic File System
9. Amazon S3
10. Amazon Textract
11. Amazon CloudWatch
12. AWS CodePipeline

The system is also linked to CODAT for financial inputs for future use. If borrowers have financial information stored in CODAT, the system automatically extracts and maps the relevant information from CODAT.

As some financial statements have varying formats, once the data is extracted, the system contains human in the loop functionality that allows the user to review the financial information uploaded before publishing it. This eliminates most of the data entry activity and allows users to simply review and publish the information.



## Types of Information Sources Supported:

1. Balance sheet
2. Income statement
3. Tax forms – 1065, 1120, 1120-S, 8825, 4562
4. CODAT

## BENEFITS

### 1. Reduced Data Entry Time

- ▶ The data is identified and extracted by the system. Users are not required to manually enter account names and values. The team discovered a 3x increase in the speed of data input into the system. AWS ML algorithms improve over time, resulting in greater data entry accuracy.

### 2. Reduced Mapping Time

- ▶ Built-in financial intelligence in the software allows it to recognize the most popular account names and automatically map them to the system.
- ▶ Human in the loop allows users to drag and drop the unmapped fields of extracted data saving time to make entry.
- ▶ Automatic mapping saves 50-70% of the time taken to manually map the accounts. Over time, the system learns the account names and enhances the mapping accuracy.

### 3. Easier Review Process

- ▶ The system keeps source files on hand for quick access to source data. Users can preview the source of the row by clicking on the amount.
- ▶ Clicking on an account (example cash) in the source file highlights the row in the solution for easy verification.

### 4. Higher Employee Morale

- ▶ Employee morale will improve as they begin focusing on more cerebral jobs. Machine learning algorithms taking over repetitive jobs will decrease errors and boost employee morale.

### 5. Rapid Scaling up of the Solution

- ▶ As companies grow and demand for processing financial statements increases, the processing capacity of the solution can be scaled in a matter of a few days depending on complexity. Companies can keep the infrastructure a step ahead of the demand and better manage new challenges.

## OUR AWS COMPETENCIES



- Public Sector
- Solution Provider
- DevOps Services Competency

- Financial Services Competency
- Migration Services Competency

### Contact us

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