

# Project Report

## 1. Introduction

### 1.1 Overview:

The "Data to Decisions Qlik Journey through LendingClub Issued Loans Analysis" project aims to analyse and derive insights from the issued loans data provided by LendingClub using Qlik Sense.

### 1.2 Purpose:

This project serves to understand the lending patterns, borrower behaviours, and loan performance within the LendingClub platform. By leveraging Qlik Sense's powerful analytics capabilities, we aim to uncover trends, risks, and opportunities within the lending landscape.

### 1.3 Technical Architecture:

The technical architecture of this project involves utilizing Qlik Sense as the primary analytics tool. Data will be collected, prepared, and visualized within the Qlik Sense environment. The architecture also encompasses data collection from LendingClub's dataset, data preprocessing, and the creation of interactive dashboards and reports.

## 2. Define Problem / Problem Understanding

### 2.1 Specify the business problem:

The business problem revolves around understanding the factors influencing loan issuance and the performance of these loans within the LendingClub platform. Additionally, identifying potential risks associated with lending activities and optimizing lending strategies are key aspects of the problem.

### 2.2 Business requirements:

- Identify key metrics for assessing loan performance.
- Analyse borrower demographics and loan characteristics.
- Identify trends and patterns in loan issuance and repayment behaviour.
- Create visualizations and dashboards for intuitive data exploration.

### 2.3 Literature Survey:

A literature survey will be conducted to understand existing research and insights regarding peer-to-peer lending platforms, particularly focusing on LendingClub. This will provide context and inform the analysis approach.

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## 3. Data Collection

### 3.1 Collect the dataset:

The dataset will be obtained from LendingClub, comprising information on issued loans including borrower demographics, loan terms, and performance metrics.

### 3.2 Connect Data with Qlik Sense:

The collected dataset will be connected to Qlik Sense for further analysis and visualization.

## 4. Data Preparation

### 4.1 Prepare the Data for Visualization:

Data preprocessing steps will be undertaken to clean, transform, and structure the dataset for visualization purposes. This may involve handling missing values, encoding categorical variables, and deriving new features if necessary.

## 5. Data Visualizations

### 5.1 Visualizations:

Various visualizations will be created to explore different aspects of the data, including:

- Loan issuance trends over time
- Borrower demographics
- Loan performance metrics (e.g., default rates, repayment behaviour)
- Correlation analysis between loan characteristics and performance

## 6. Dashboard

### 6.1 Responsive and Design of Dashboard:

An interactive and user-friendly dashboard will be designed within Qlik Sense, incorporating the visualizations created in the previous step. The dashboard will be responsive, allowing users to dynamically explore and drill down into the data.

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## 7. Report

### 7.1 Report Creation:

A comprehensive report summarizing the findings of the analysis will be created. This report will include key insights, trends, and recommendations derived from the data analysis process.

## 8. Performance Testing

### 8.1 Amount of Data Rendered:

Performance testing will be conducted to assess the responsiveness and scalability of the dashboard, particularly when handling large volumes of data.

### 8.2 Utilization of Data Filters:

The efficiency of data filters within the dashboard will be evaluated to ensure smooth data exploration and analysis by end-users.

This project aims to provide valuable insights into LendingClub's issued loans, enabling informed decision-making and optimization of lending strategies.