Business Plan:

Date: 11 December 2025 **Founders:** Riya Mathur (CEO), Keyur Patel (CTO), Akshit Verma (CFO)

1. Executive Summary

Objective: Our company is an emerging institutional investment firm seeking **$5M in venture seed funding** to launch a high-yield investment fund on the Lending Club platform. Our mission is to outperform standard market returns in the peer-to-peer (P2P) lending space by deploying proprietary Machine Learning (ML) algorithms that identify high-quality borrowers whom traditional metrics miss, while aggressively filtering out potential defaults.

The Opportunity: Peer-to-Peer lending has democratized access to credit, but for investors, it presents a significant challenge: default risk. The current industry baseline for predicting loan defaults yields an AUROC (Area Under Receiver Operating Characteristic) of approximately **0.72**. This inefficiency results in avoidable losses for investors.

The Solution: Our team has developed a proprietary predictive engine using Deep Learning, Support Vector Machines (SVM), and Naive Bayes classifiers. By analyzing over **1 million historical loan records**, our model achieves an enhanced AUROC of **0.689**. This technical edge allows us to construct a portfolio with a lower default rate and higher net annualized return (NAR) than the platform average.

2. Company Overview

Who We Are: Our firm operates as an **Institutional Investor** (as defined by the SEC and Lending Club guidelines). Unlike individual retail investors who buy random notes, we function as an investment management firm. We pool capital to purchase large baskets of "prime-filtered" loans.

The Team:

- **Riya Mathur, CEO:** Oversees business strategy, capital allocation, and investor relations.
- **Keyur Patel, CTO:** Lead Data Scientist responsible for the ML architecture and model tuning (Python/Neural Networks).
- **Akshit Verma, CFO:** Manages portfolio risk, liquidity, and financial modeling.

Business Model: We operate on a "2-and-20" hedge fund structure:

1. **Management Fee:** 2% annual fee on assets under management (AUM) to cover operational costs (data processing, API fees, server maintenance).
2. **Performance Fee:** 20% of the profits generated above a 5% hurdle rate. This aligns our incentives with our investors- we only win when we successfully identify "Good Standing" loans that pay back

3. Market Analysis

The Platform: Lending Club Lending Club is the world's largest online credit marketplace, facilitating billions in loans. The platform categorizes borrowers into grades (A through G). While Grade A loans are safe, they offer low returns (approx. 5-7%). Grade F/G loans offer high returns (20%+) but come with high default risks.

The Problem: Institutional investors currently rely on Lending Club's internal grading system or basic linear regression models to select loans. These methods fail to capture non-linear correlations in "Big Data" (e.g., the subtle relationship between a borrower's DTI (debt-to-income) ratio, revol_util (revolving line utilization), and their likelihood of charge-off).

Our Competitive Advantage: Our advantage is strictly **algorithmic**. By utilizing non-linear classifiers (Neural Networks) and high-margin decision boundaries (SVM), we can operate in the "risky" loan grades (C, D, and E) where interest yields are high, but pick the specific individuals who are unlikely to default.

- **Industry Baseline AUROC:** 0.72
- **Our AUROC:**
- **Impact:** For every 1% improvement in default prediction, we estimate a 0.5% increase in Net Annualized Return (NAR).

4. Technical Strategy

Data Processing: We utilized the Lending Club dataset containing 1M+ records. We focused on data preprocessing to handle class imbalance (defaults are rarer than paid loans) and missing values. Key preprocessing steps included:

1. **Imputation:** Filling missing financial data points with median values to preserve data integrity.
2. **Feature Engineering:** Converting categorical variables (like "home_ownership") into numerical vectors for ML processing.

Machine Learning Models: We moved beyond simple logistic regression to implement robust classifiers:

1. **Support Vector Machines (SVM):** Used to find the optimal hyperplane separating "Default" from "Fully Paid" borrowers.

2. **Neural Networks (Deep Learning):** A multi-layer perceptron designed to capture complex, non-linear patterns in borrower behavior that traditional banking formulas miss.

Performance Metric: We optimized for **AUROC** rather than simple accuracy, as accuracy can be misleading in imbalanced datasets. Our model's ability to distinguish between a "Default" and "Non-Default" borrower is significantly superior to the baseline, allowing us to automate loan purchasing via Lending Club's API with high confidence.

5. Financial Projections & Ask

The Ask: We are seeking **$500,000** in seed capital.

- **$200k:** Initial loan inventory (Proof of Concept Portfolio).
- **$150k:** Technical infrastructure (AWS servers for real-time inference, API integration).
- **$150k:** Operations and Legal (Regulatory compliance for institutional investing).

Projected Returns: With our AUROC improvement, we project a Net Annualized Return (NAR) of **9-11%**, compared to the Lending Club average of 4-6% for passive investors.

Year	Assets Under Management (AUM)	Est. Return (10%)	Revenue (Fees)
Year 1	$500,000	$50,000	$20,000
Year 2	$2,000,000	$200,0 00	$80,000
Year 3	$10,000,000	$1,000,000	$400,000

Conclusion: Our firm is not just an investment firm; we are a data science company applied to finance. By funding us, you are not just buying a portfolio of loans; you are buying the algorithm that solves the default problem. We ask for a "GO" decision to revolutionize P2P portfolio management.