Peer-to-Peer Lending: Lending Club loan Data

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The Data Incubator

THE AI IN FINTECH MARKET MAP

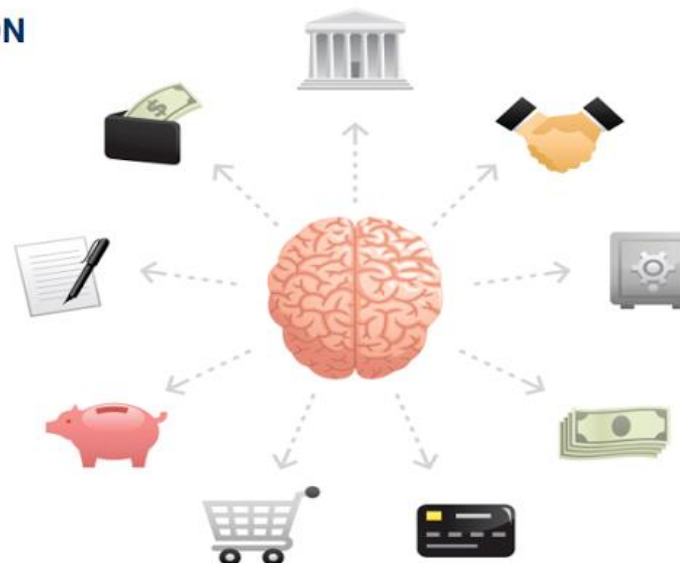## CREDIT SCORING / DIRECT LENDING

Affirm · AVANT · zest finance · argon · ADF Applied Data Finance

habito · CREAM FINANCE · aire · float · naborly · Upstart

creditvidya · james · Wecash闪银

ASSISTANTS / PERSONAL FINANCE

digit · MoneyLion · personetics · Kasisto

clinc · Penny · TRIM · claritymoney

cleo. · homebot · Active.Ai · change

QUANTITATIVE & ASSET MANAGEMENT

wealthfront · sentient technologies · SIGOPT · ALPINE DATA

Clone Algo · NUMERAI · WALNUT ALGORITHMS · fount · domeyard LP

Alpaca · AIM · ForwardLane · TRUMID · ALGORIZ

it.ai · AIDYIA · BINATIX

REGULATORY, COMPLIANCE, & FRAUD DETECTION

TRIFACTA · Digital Reasoning · WorkFusion · Paxata

DataRobot · sift science · onfido · feedzai

SKYTREE · SOCURE · bigstream · trooly

BehavioSec · ComplyAdvantage · cortical.io

Dimebox · Fraugster · neurensic · PredicSis

Jewel Paymentech · CheckRecipient · Fortia

INSURANCE

CAPE ANALYTICS · Captricity · TRACTABLE · riskgenius · CYENCE

Shift Technology · Zendrive · Lemonade · UNDERSTORY

MARKET RESEARCH / SENTIMENT ANALYIS

Dataminr · alphasense · Orbital Insight

Descartes Labs · iSENTIUM · indico · acuity · SIGNAL

FeedStock Intelligent Information Management

GENERAL PURPOSE / PREDICTIVE ANALYTICS

OPERA SOLUTIONS · AYASDI · KENSHO · NarrativeScience

context relevant · H2O.ai · smartzip predictive marketing · CognitiveScale

Anodot · Lucena Quantitative Analytics · Numenta

BUSINESS FINANCE & EXPENSE REPORTING

fyle · NetChain² · AppZen · ZEITGOLD. · WINT

DEBT COLLECTION

TrueAccord · collectAI

CB INSIGHTS

How Lending Club works ?

How it works

We're not a bank. Instead, we connect borrowers with investors through our online marketplace.

Investors

In exchange for competitive returns, investors purchase Notes, which correspond to fractions of loans.

Learn About Investing

LendingClub

LendingClub screens borrowers, facilitates the transaction, and services the loans.

Loans are issued via WebBank, member FDIC

Borrowers

Borrowers use loans to consolidate debt, improve their homes, finance major purchases, and more.

Learn About Loans

Trends of Lending Club

- data from Google Trends shows in past 5 years the search rate is doubled
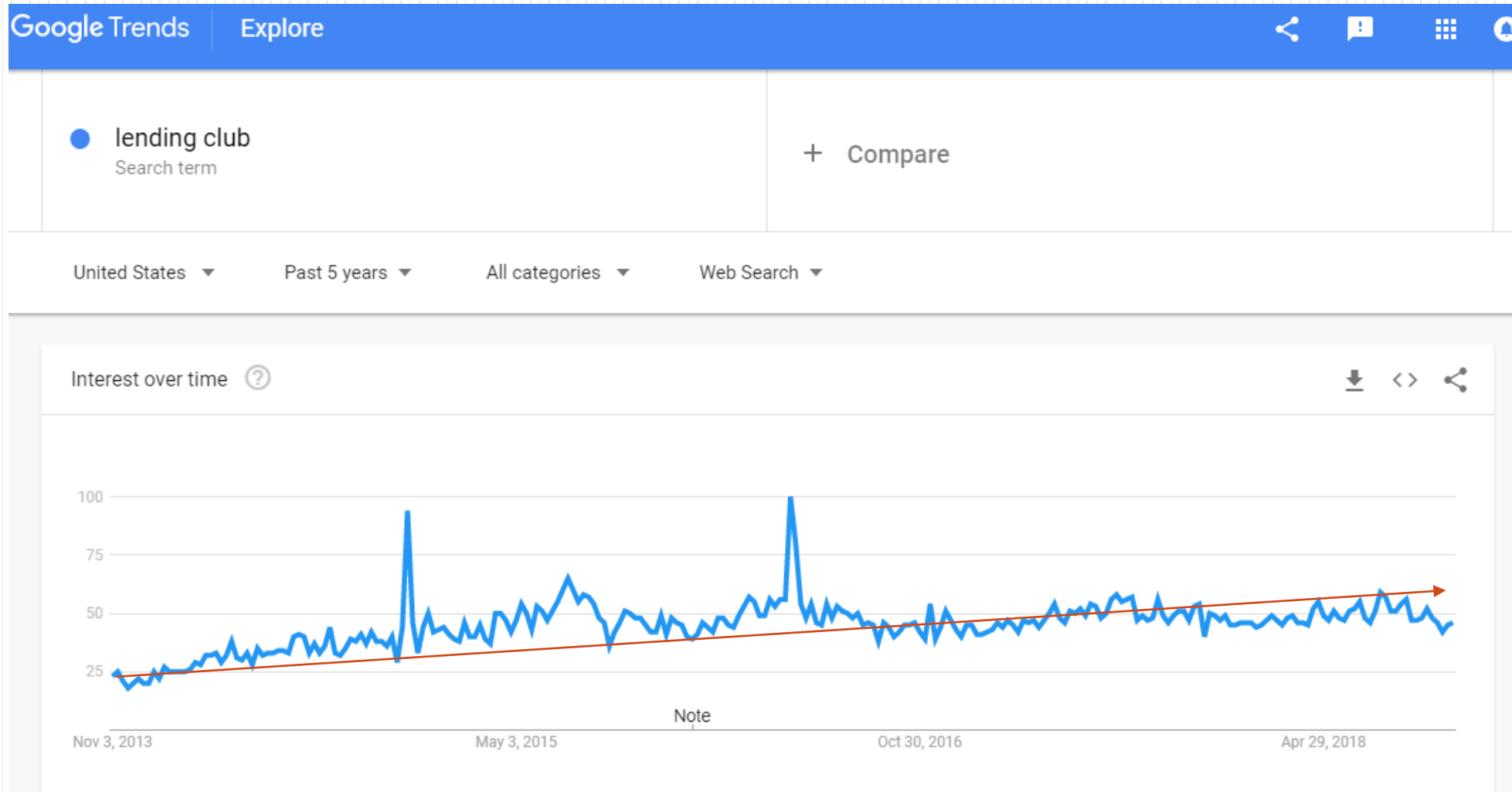
Data Set description

- complete loan data for all loans issued through the 2018Q2, including the current loan status (Current, Late, Fully Paid, etc.) and latest payment information.

- Additional features include credit scores, number of finance inquiries, address including zip codes, and state, and collections among others.

- The file is a matrix of about 130 thousand observations and 145 variables.

- Link : https://www.lendingclub.com/info/download-data.action

Identify problems and opportunities

- Since these loans are unsecured and companies creating the market generally do not invest their own capital, neither borrowers nor companies assume any risk. Entire credit risk is born by investors. Literature shows that credit risk depends upon borrower characteristics, loan terms and regional macroeconomic factors

- To help investors identify unsecured loans likely to be fully paid, a machine learning algorithm was developed to forecast probability of full payment and probability of default

- Two major approach for finding the Loan Default :
  - Credit Scoring
  - Profit Scoring

Visualize the Data

annual income vs. funded amnt
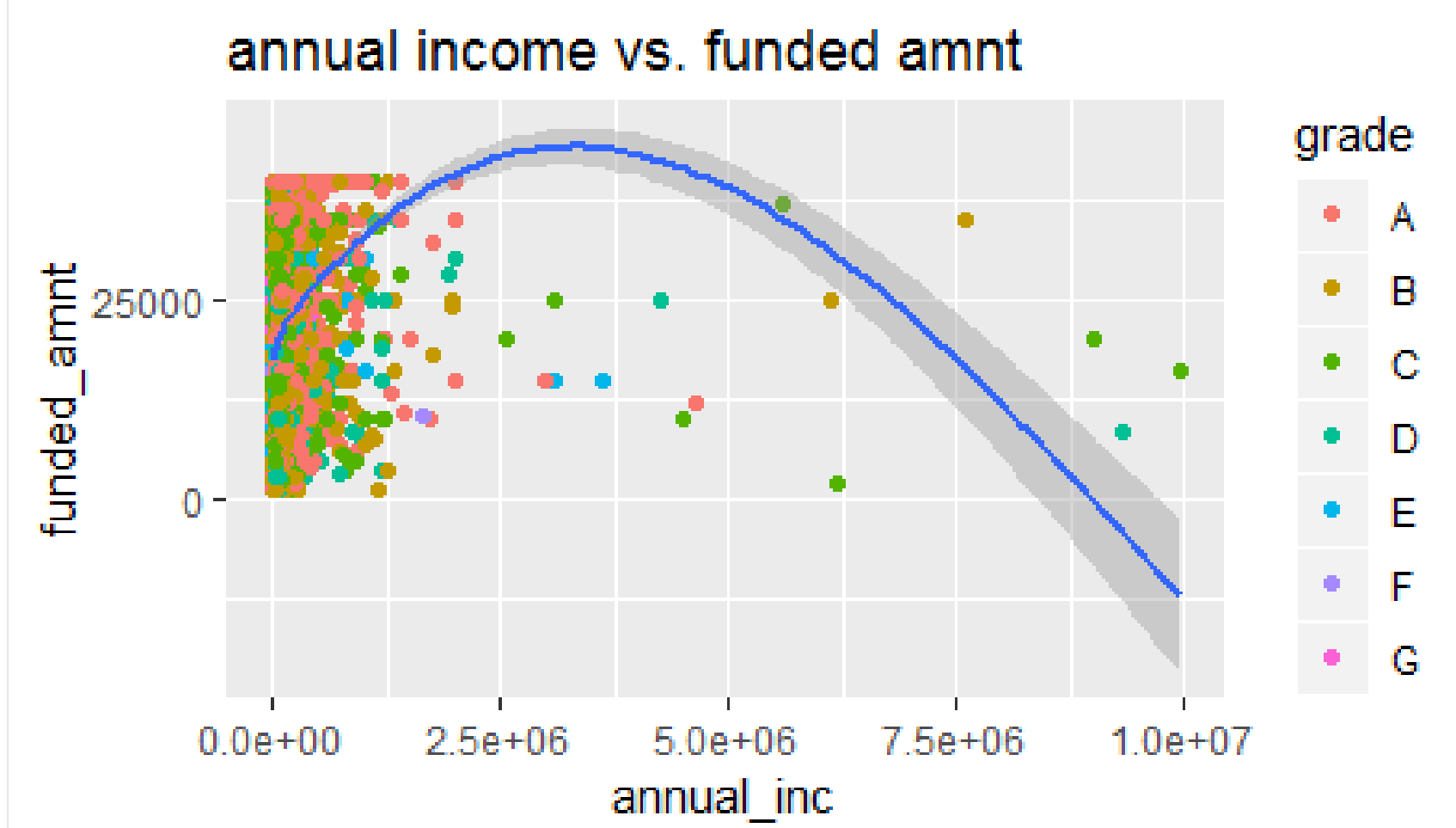
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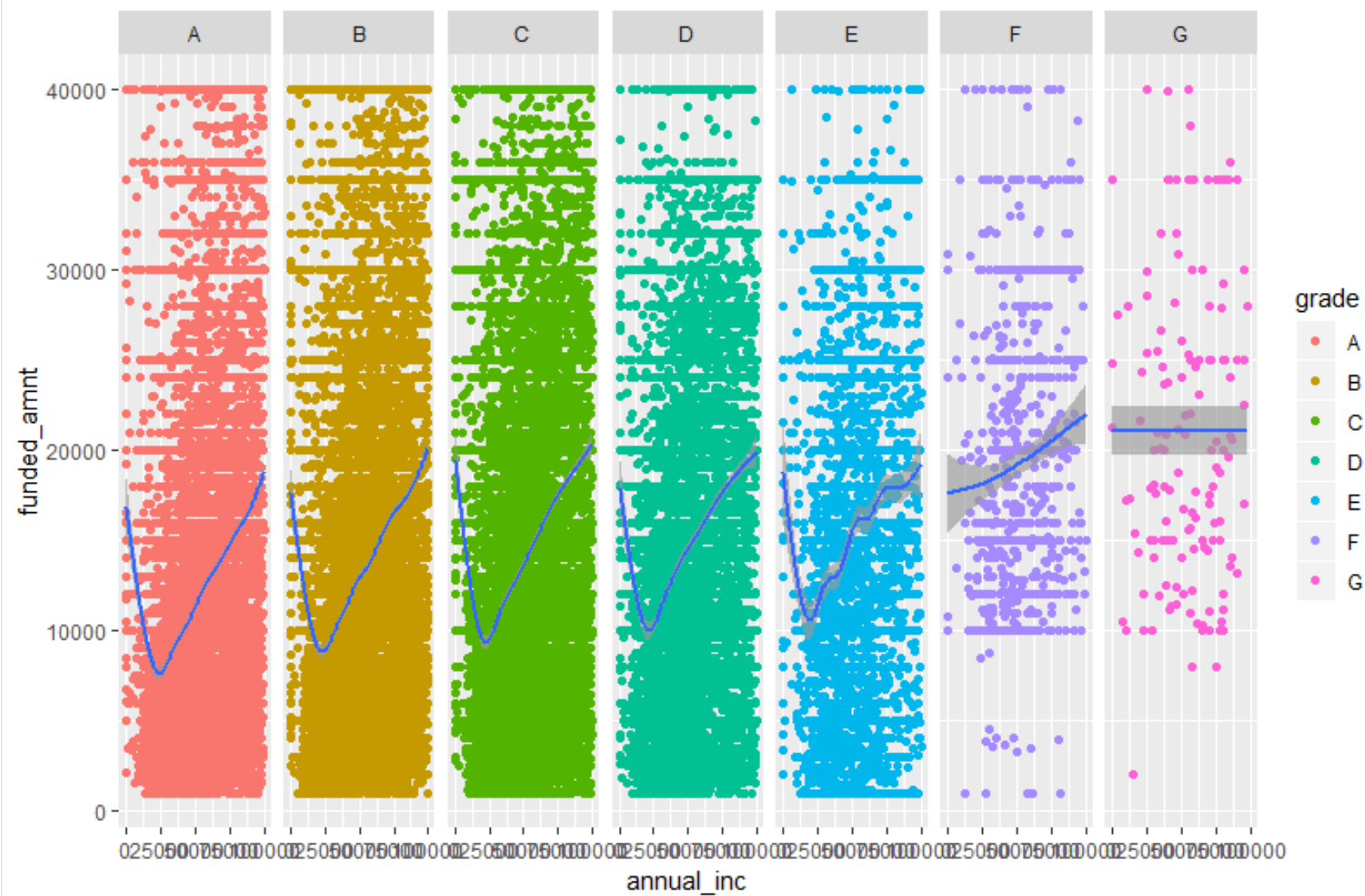
LOAN PERFORMANCE DETAILS

	TOTAL ISSUED	FULLY PAID	CURRENT	LATE	CHARGED OFF (NET)	PRINCIPAL PAYMENTS RECEIVED	INTEREST PAYMENTS RECEIVED	AVG. INTEREST RATE	ADJ. NET ANNUALIZED RETURN[1]
A	$5,109,435,975	$2,483,982,172	$1,502,747,863	$12,044,312	$85,497,078	$3,509,170,719	$382,522,874	7.02%	4.64%
B	$8,246,678,325	$3,707,762,336	$2,434,290,087	$52,004,308	$339,001,303	$5,421,382,614	$1,001,392,597	10.59%	5.83%
C	$8,771,516,575	$3,455,590,143	$2,746,923,026	$99,380,210	$655,653,300	$5,269,560,032	$1,471,737,151	14.08%	6.15%
D	$4,542,159,725	$1,776,192,293	$1,240,752,538	$73,458,971	$548,638,074	$2,679,310,135	$981,672,136	17.98%	5.65%
E	$2,208,813,325	$879,312,923	$450,316,022	$39,307,019	$408,131,140	$1,311,059,140	$619,693,829	21.53%	4.84%
FG	$1,011,552,425	$383,964,124	$180,159,333	$22,489,775	$253,327,909	$555,575,407	$324,466,844	25.97%	2.71%
All	$29,890,156,350	$12,686,803,991	$8,555,188,869	$298,684,595	$2,290,248,804	$18,746,058,047	$4,781,485,431	13.45%	5.51%

Percentage of Default and late to Total loan issued (up to 2018Q2):

($2290248804 + $298684595) / ($29890156350) = **8.6%**

Goals and Objectives

- Use Deep learning and Neural network to Decrease the Percentage of Default loan.

- Use more source of Financial Data to achieve this Goal , like Macroeconomic data of Unemployment or economic growth

- Make a dashboard for P2P loan platform to make a better decision