

# **Evolving Prolog**

gene expression programming

**mindrix**

# The Problem

# Lending Club

peer to peer loans

[Account](#) | [Notes](#) | [Portfolios](#) | [Order History](#) | [Account Activity](#) | [Bank Account](#) | [Statements](#) | [Statistics](#)

## Browse Loans



Invite Friends

[Summary](#) | [Portfolio Builder](#) | [Browse Loans](#) | [Alert](#) | [Transfer](#) | [Trading Account](#) | [Automated Investing](#)

Available: \$861.21

Add Funds

Add to Order

Showing Loans 1 - 15 of 1149

<< < 1 **2** 3 4 5 > >> 15 ▾

### Build a Portfolio

Per Loan:

### Filter Loans Save | Open

#### Public Records ▾

Exclude Loans with Public Records

#### Interest Rate ▾

- All     D 16.76%  
 A 6.89%     E 19.95%  
 B 10.19%     F 24.41%  
 C 13.53%     G 25.91%

<input type="checkbox"/> Investment	Rate	Term	FICO®	Amount ▲	Purpose	% Funded	Amount / Time Left
<input type="checkbox"/> \$0	<b>C 5</b> 14.65%	36	665-669	\$2,400	Other	<div style="width: 60%;"><div style="background-color: green; height: 10px;"></div></div> 60%	\$950 13 days
<input type="checkbox"/> \$0	<b>B 3</b> 9.99%	36	695-699	\$2,800	Major Purchase	<div style="width: 84%;"><div style="background-color: green; height: 10px;"></div></div> 84%	\$425 12 days
<input type="checkbox"/> \$0	<b>C 1</b> 12.29%	36	670-674	\$3,000	Other	<div style="width: 85%;"><div style="background-color: green; height: 10px;"></div></div> 85%	\$425 12 days
<input type="checkbox"/> \$0	<b>C 1</b> 12.29%	36	665-669	\$3,000	Home Improvement	<div style="width: 75%;"><div style="background-color: green; height: 10px;"></div></div> 75%	\$725 13 days
<input type="checkbox"/> \$0	<b>A 5</b> 7.89%	36	675-679	\$4,000	Home Improvement	<div style="width: 15%;"><div style="background-color: green; height: 10px;"></div></div> 15%	\$3,400 13 days

which ones are good?

# Lending Club Statistics



Invite Friends

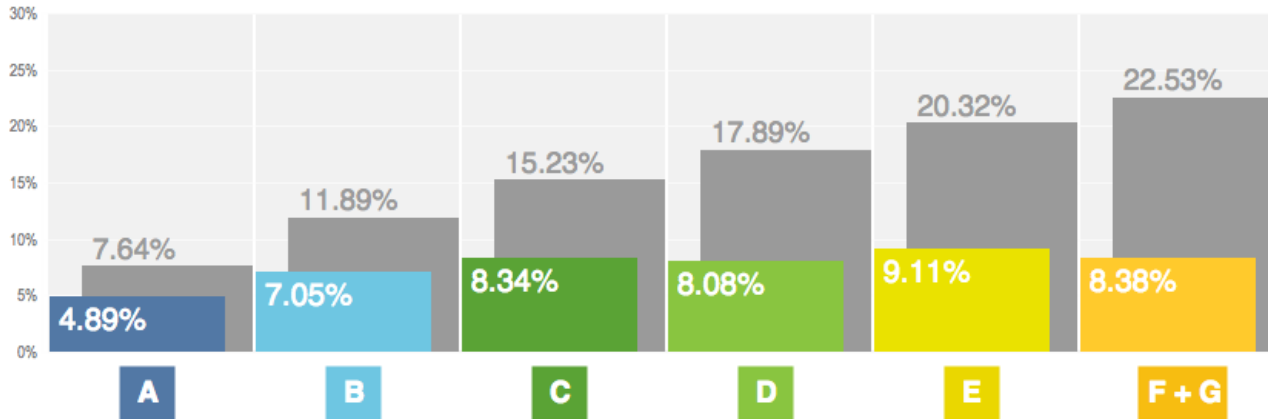
Platform: [Highlights](#) | Public Note Offering: [Investor Performance](#) | [Loan Statistics](#) | [Download Data](#)

## LAST QUARTER AVERAGE INTEREST RATE

36-Month Loans: **11.72%**    60-Month Loans: **15.67%**    All Loan Terms: **13.44%**

## HISTORICAL RETURNS BY GRADE

Adjusted Net Annualized Return    Average Interest Rate



data!

# The Result

## Your Notes purchased on the Lending Club platform

Adjusted Net Annualized Return<sup>3</sup> ⓘ: **14.04%**

Weighted Average Interest Rate: **14.78%**

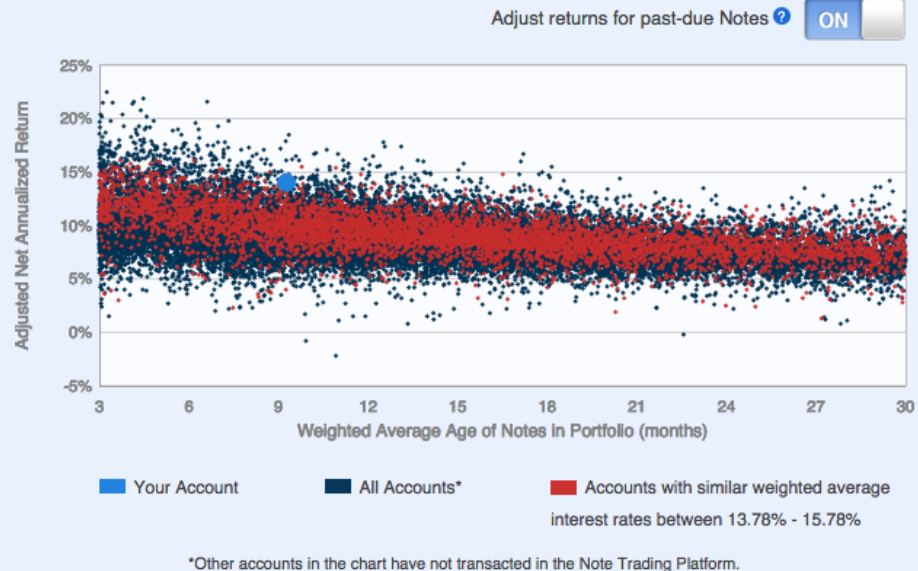
Weighted Average Age of Portfolio: **9.3 mos**

Number of Notes: **139**

## How to Interpret This Chart

You can use this chart to understand how the performance of investments of the same weighted average age with a similar weighted average interest rate typically changes over time.<sup>3</sup> This chart is not a prediction of how a particular portfolio will perform and actual results may vary.

Volatility may be influenced by many factors, including the following:<sup>1</sup>



## Customize which other accounts are displayed in the chart

Highlight Accounts with Similar Weighted Average Interest Rate

Weighted Average Interest Rate Range ⓘ

+/- 1.00% ⓘ of my account of 14.78%

Minimum Number of Notes ⓘ

Show accounts with  ⓘ Notes or more

Portfolio Concentration ⓘ

No Note larger than  ⓘ of total portfolio value

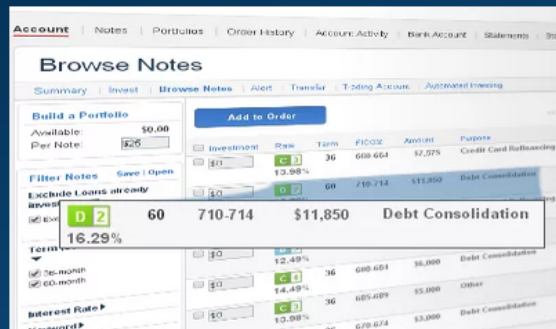
98% success



**p2pquant.com**

note selection

# Earn Better Returns on Lending Club



We help Lending Club investors choose notes that are most likely to have exceptional returns. Our recommendations have earned investors a 11.1% annual return.

[SIGN UP FOR FREE ACCOUNT](#)

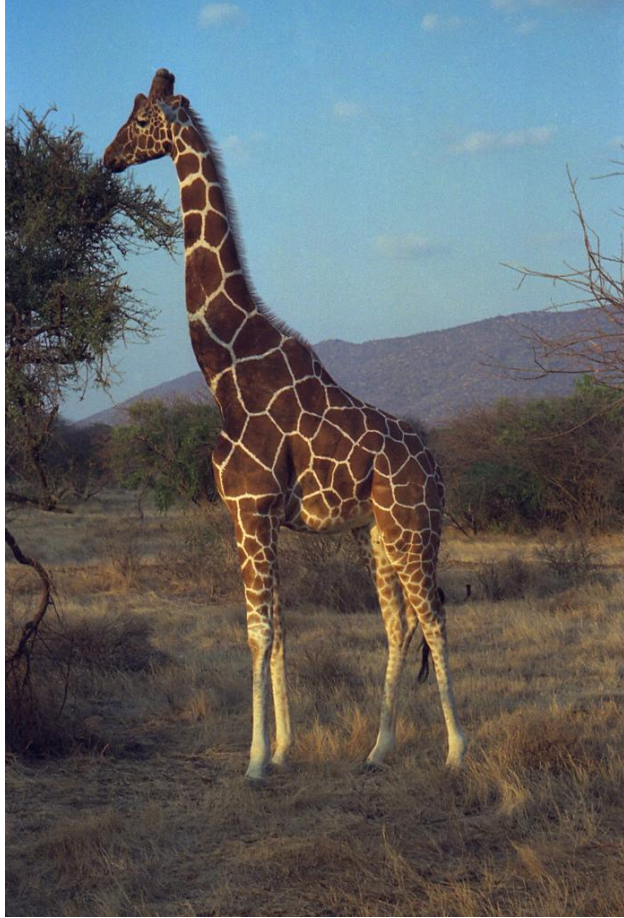
5 free recommendations every month

Learn More About: [Lending Club](#) | [How it Works](#) | [Our Methods](#)

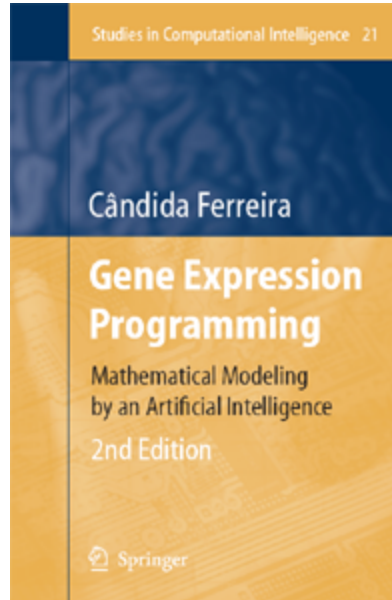
## Our Model Earned **11.1%** Return

Our primary note recommendations **earned a 11.1% return** since inception. (Return calculated using XIRR method).

# **Genetic Algorithms**



because giraffes



Candida Ferreira FTW!

**Genotype**

ATGCTTCGGCAAGACTCAAAAAATA

**Phenotype**





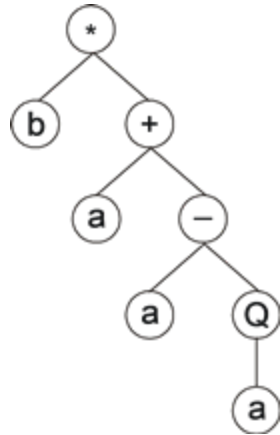
*Ophrys apifera*



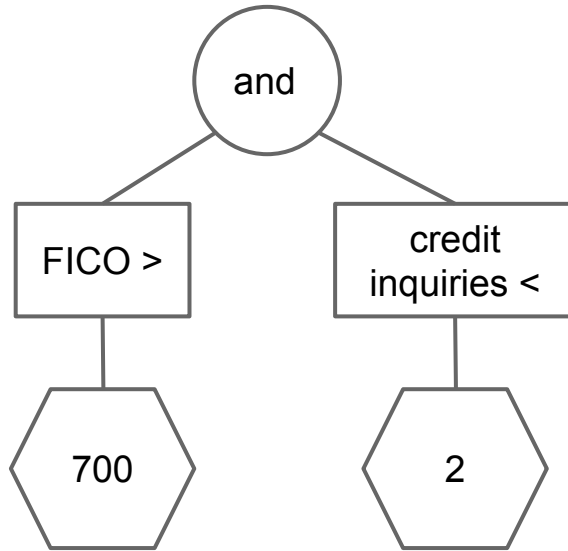
xkcd 1259

# **Genotype : Phenotype**

Source : AST



**\*b+a-aQab+//+b+babbabbbababbaaa**



Investment strategy

```
invest :-  
    fico_above(700),  
    inquiries_below(2).
```

Prolog

**Why Prolog?**

```
?- writeln(hi).
```

```
hi
```

```
?- X=writeln(hi).
```

```
X = writeln(hi).
```

```
?- call($X).
```

```
hi
```

homoiconic



```
?- X=writeln(Message).
```

```
X = writeln(Message).
```

```
?- X=writeln(Message), Message=hi.
```

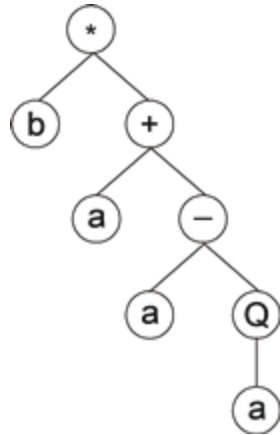
```
Message = hi,
```

```
X = writeln(hi).
```

```
?- call($X).
```

```
hi
```

logic variables



**\*b+a-aQab+//+b+babbabbbababbaaa**

```
cross(Mom,Dad,Kid1,Kid2) :-  
    % genes are same length  
    same_length(Mom,Dad,N),  
  
    % choose crossover point  
    X is random(N),  
    same_length(MomA,DadA,X),  
  
    % split and reassemble genes  
    append(MomA,MomB,Mom),  
    append(DadA,DadB,Dad),  
    append(MomA,DadB,Kid1),  
    append(MomB,DadA,Kid2).
```

declarative

# **Fitness Function**

internal rate of return

# **Generations**

you kids get off my lawn

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Adjusted Net Annualized Return<sup>3</sup> ⓘ: **14.04%**

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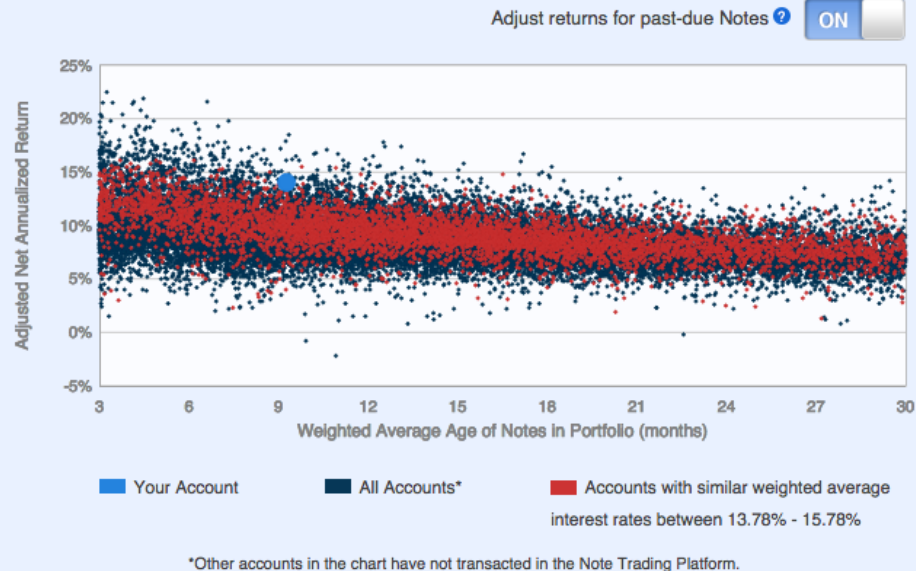
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**p2pquant.com**

thanks