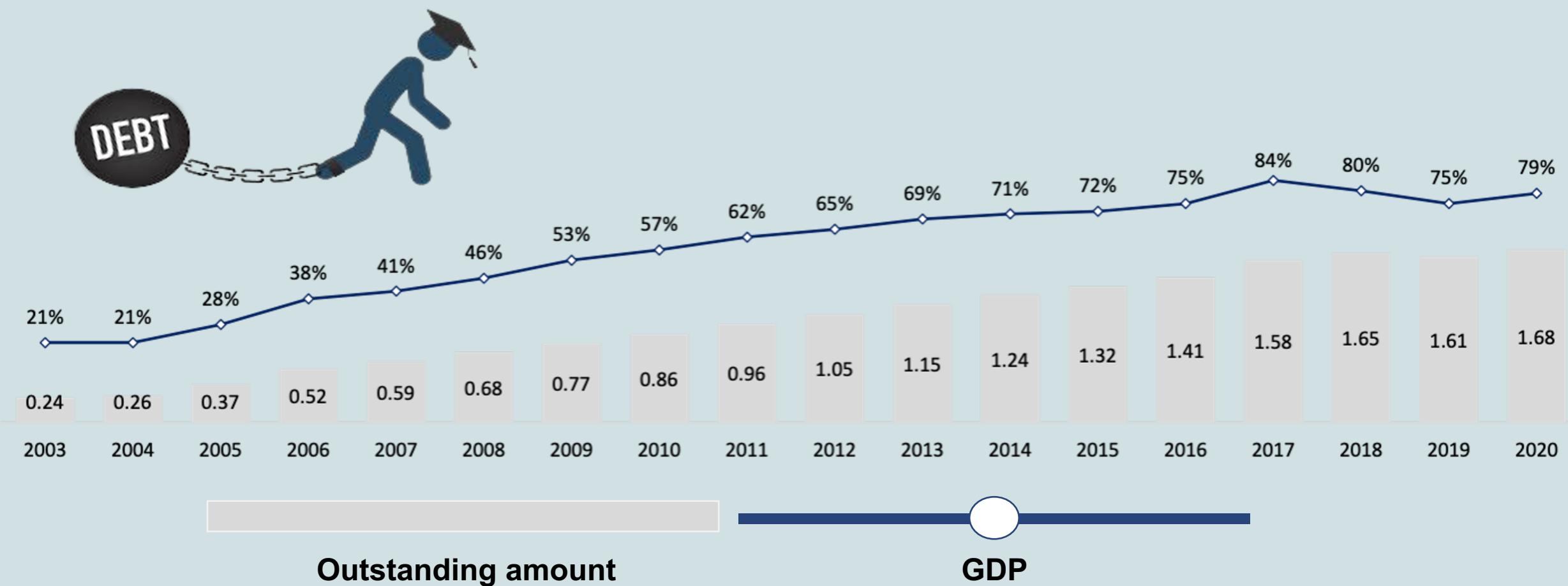


ALIS - Student Loans on Blockchain

A 1.6 trillion dollar mountain



A disadvantaged generation



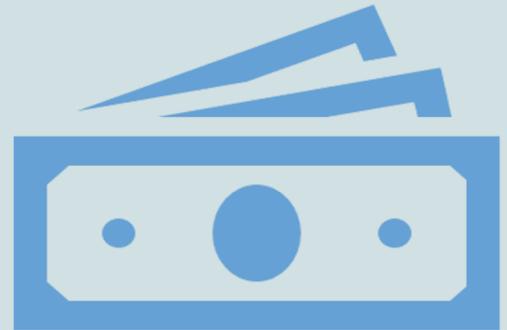
20% of salary is
spent to repay debt



82% delay savings

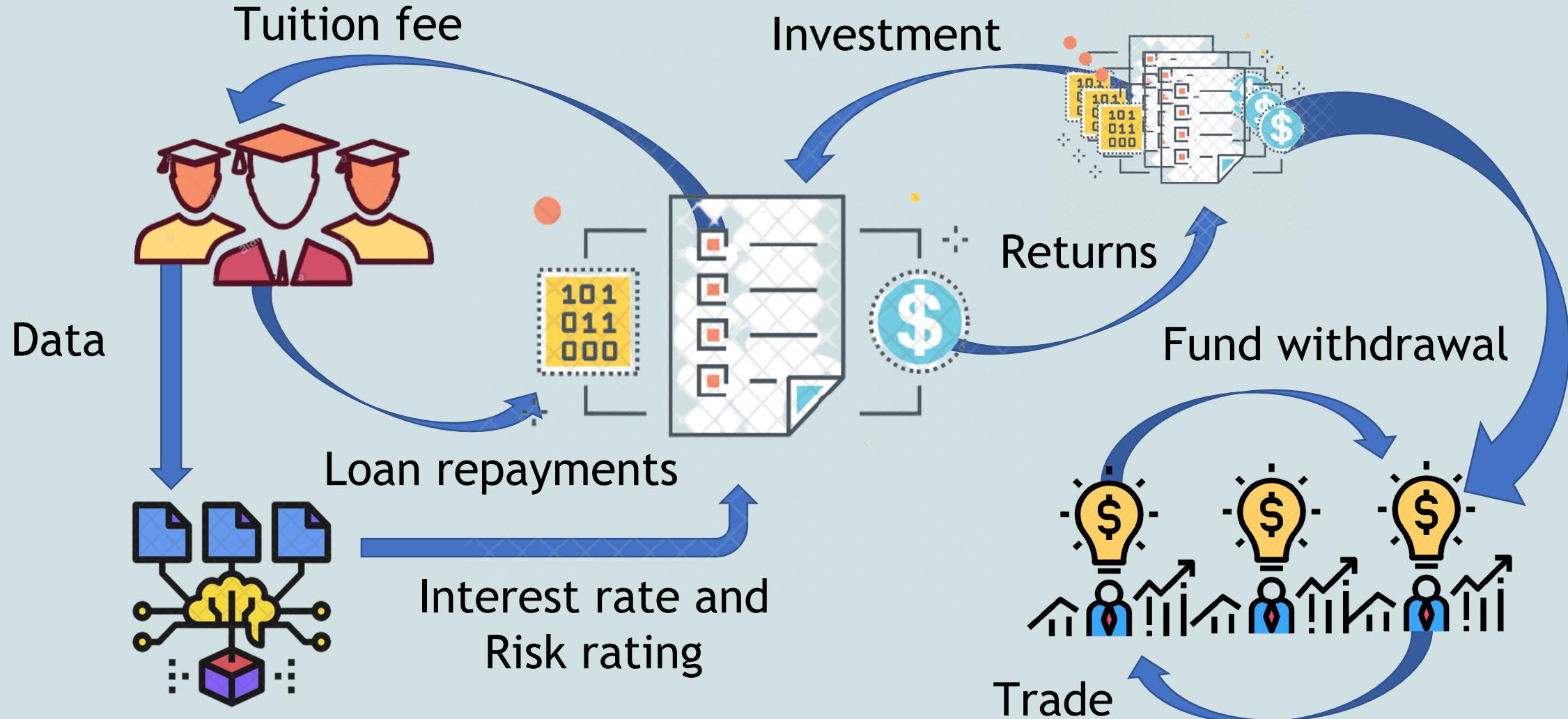


60% do not go on
vacations



46% would not make
the same financial
decision

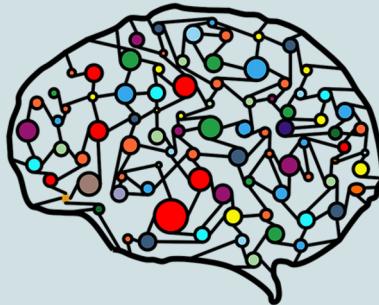
A solution



An intelligent solution



Dataset:
US Department of Education
College scorecard dataset,
involving 6,806 institutions



Analysis:
Random Forest regression
optimized with GridSearchCV



Pre-processing:
One-hot-encoding for
categorical variables;
standardization of data;
imputation of missing values



Results:
Predicted 3-year default
rate for given student.
Prediction MAE of 0.021

Clear information for everyone



Interest Rate:
$$(1 - \text{recovery rate}) * \text{annual default rate} + \text{fixed interest rate}$$



Risk Rating:
Defines 10 intervals such that the incremental default rate is constant

Prototypes

Investor Bob

Student Name: Alice

University	ABC University
Credit Amount	\$10,000
Interest Rate	3.1%
Risk Rate	AA
Term	4 years

Grant the loan

Student Alice

Loan ID 1

Loan Used: 30%

Appy for a new loan

Original Amount	\$10,000
Principal Amount	\$7,000
Interest Rate	3.1%
Amount Paid	\$0
Time Since Last Payment	1 year
Amount left to pay	\$10,310

Withdraw

Repay

Investor Bob

You have a message from the market:

Loan ID	333
Investor	Simona
Ask Price	\$20,000
Original Amount	\$50,000
Principal Amount	\$18,000
Interest Rate	4.1%
Time Since Last Payment	3 years
Amount left to pay	\$20,306

YES **NO**

Thank you!



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