

The logo for H2O.ai, featuring the text "H2O.ai" in a bold, black, sans-serif font. The "2" is a subscript. The logo is centered within a bright yellow square. The background of the entire slide is a dark, textured surface with vertical lines and a grid pattern, illuminated with a yellowish-green light that creates a bokeh effect.

Democratizing Credit with AI

Financial institutions are using AI to
make better decisions

Traditional credit



Traditionally, people received a credit score based on data from different credit bureaus. The score was calculated based on payment history, missed payments, outstanding balances, etc.

Yet the “old way” of determining credit has limitations. Because the traditional method is based on broad segments and assumptions, it can result in denying credit for consumers without considering their current situation or other extenuating factors. Today, forward-looking banks and a number of startups are disrupting the traditional approach with AI-based credit—essentially, modernizing and democratizing credit with AI, while complying with regulatory requirements.

Going beyond the credit report with AI

Financial companies are using AI to bring together new, previously unused demographics and data points when considering credit, including:

- The consumer's career and/or education (or if in school, what degree, what grades?)
- Where the consumer lives
- The consumer's spending patterns
- Current income
- Employment opportunity
- Recent credit history

A robotic hand is holding a magnifying glass over a data table. The magnifying glass is focused on the number 8137 in the second column of the table. The table contains various categories and numerical data points.

dataflow	52937	147	360	250	23
Summit	55098	154	357	250	16
Bridging The Gap	14563	43	138	1	6
Hide And Seek	94733	286	331	2	4
Female1	49530	157	315	15	14
Solidarity	14430	46	313	1	1
Pile Of Documents	221	290	150	19	
Reconciliation	278	15	15	1	
Social Worker	275	1	2		
Female with Group of Males	15	15	21		
Room meeting	0	1	12		
	1	0	4		
	15	6	2		
	0	1			
	35	47			
	4				
	2				
	3				
	14				
Composite Image	40960	190			
Audience	105790	491			
Chauffeur	6448	30			
spokesman	12692	60			
enrollment	5476	26			
blue toned	8096	39	25		
happy people	7055	34	202	2	
Design Studio	14149	70	202	6	3
Bank:	13168	65	202	2	3
blogging	8063	40	201	15	5
Stock Ticker Board	19751	98	201	15	11
web design	5225	26	200	150	3
Track And Field	11610	58	200	3	2
Finish Line	5014	25	200	1	3
Team Photo	41847	211	198	6	28
Progress Report	24742	126	196	1	3
Computer At Home	21652	110	196	3	16
Acrobat	11551	59	195	25	3

AI personalizes credit



This “it’s all about you” approach enables financial institutions to offer personalized credit or credit scoring using feature-rich data about the consumer as a person.

AI and machine learning (ML) technologies can expedite the process of credit scoring, dramatically reducing the time from application to decision. ML capabilities can also identify key characteristics and indicators of creditworthiness that may not appear in a credit check, such as current financial health, current financial habits, and even social media interactions. Financial institutions can also use new interpretability techniques with an AI and ML platform to help satisfy regulatory requirements and provide reason codes for credit decisions driven by AI.

The new world of credit opens up possibilities



Using AI/ML enables a more granular and individualized approach to credit scoring. This gives banks and credit card companies the ability to more accurately assess each borrower and provide credit. It opens the possibility of lending to people who would have been denied under the traditional scorecard system due to low or no credit, such as:

- Students or new graduates
- Recent immigrants or ex-pats
- New business owners

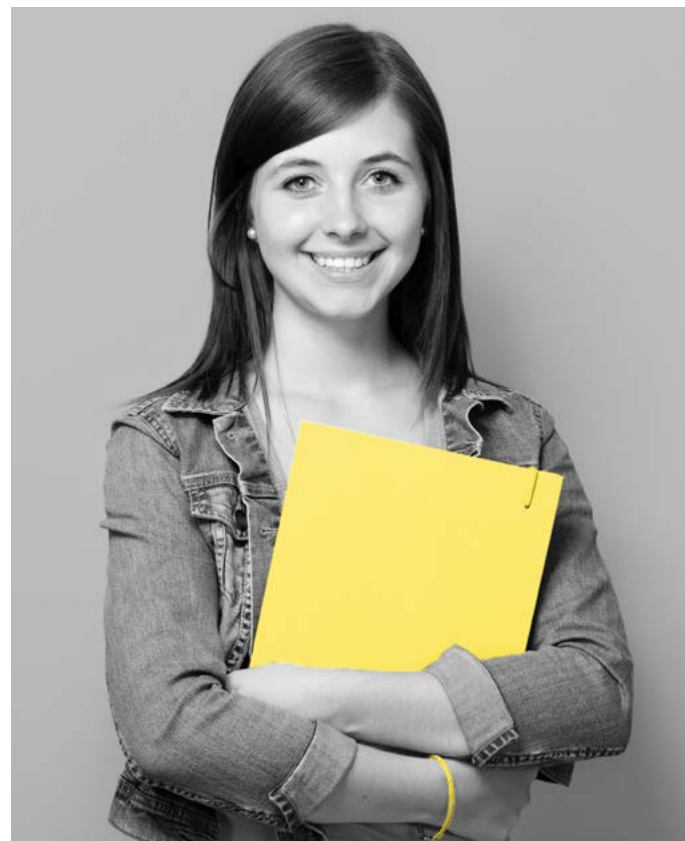
AI/ML can personalize the consumer's credit, and therefore "score" the consumer much more precisely and predict their risk profile. This is a game-changer for consumers and lending institutions, as it makes it easier for deserving individuals who have little or no established credit history to get credit.

AI is democratizing credit

Using AI in the credit process gives people across socio-economic background the ability to access and use loans. This not only benefits the consumer, but there is increased opportunity for financial institutions in reaching new markets and an expanded potential credit customer pool—and democratizes the process of credit.

Similarly, it is possible to “democratize AI,” making AI available to users across the organization enables companies across industries and users across roles the ability to use AI to solve business and social challenges. In the following pages, read about three businesses that H2O.ai is working with, which are personalizing and thus modernizing and democratizing credit with AI:

- Visión Banco
- Deserve
- Underwrite.ai





Use case:

Visión Banco

Visión Banco, based in Asunción, Paraguay, provides financial services to small and micro-sized companies. Its data science team knew it needed to expand its services and offers to customers, wanted to quickly and accurately determine credit risks, and wished to enhance practices by implementing predictive analytics to predict customer default or churn. Yet the team could not do this at scale without a new tool or plan.

Visión Banco trialed H2O Driverless AI and realized the power of the platform. Shortly after, the bank deployed H2O Driverless AI on an IBM Power System.

As a result, Visión Banco cut time to build models from six months to less than a week and doubled the customer propensity to buy rate.

Use case:

Deserve

Deserve uses machine learning and alternative data to provide millennials and Gen Z's fair access to credit products. Because most students don't have a credit history, Deserve measures their credit potential, not just the associated risk.

Using H2O Driverless AI for automatic machine learning, Deserve can expedite deployment of unique algorithms that determines credit worthiness. This enables Deserve to provide credit to students and other underserved markets based on the new algorithmic reviews.

H2O Driverless AI enables Deserve to use more factors and deploy fast, accurate scores. Driverless AI speeds iteration cycles and enables the team to focus on core tasks such as problem formulation, model design, and insight interpretation. With Driverless AI, tasks that typically take months, are completed in just minutes or even hours.



Use case:

Underwrite.ai

Underwrite.ai applies advances in AI derived from genomics and particle physics to provide lenders with non-linear, dynamic models of credit risk. Underwrite.ai leverages H2O Driverless AI to quickly and effectively determine credit lending risk.

Using H2O Driverless AI with expansive data sets, underwrite.ai builds and trains models that return an automated credit decision in milliseconds, radically outperforming traditional scorecards in both consumer and small business lending. As a result, Underwrite.ai has much more reliable lending risk profile for creditors to use when evaluating a credit or loan app.

As an example, a major online installment lender had a first-payment default rate (FPD) of 32.8%, with overall defaults in excess of 60%. After implementing the underwrite.ai algorithm, the lender saw a month-over-month reduction in its FPD. Today, the lender is reporting a default rate of 8.5%, compared to a sector average of 35%.

Democratizing AI with H2O.ai

The mission at H2O.ai is to democratize AI for everyone across every industry so that businesses can use the power of AI to solve business and social challenges. H2O Driverless AI is an award-winning platform for automatic machine learning that empowers data science teams to scale by dramatically increasing the speed to develop highly accurate predictive models.

Driverless AI includes innovative features of particular interest to financial services including machine learning interpretability (MLI), reason codes for individual predictions, and automatic time series modeling.

The financial services industry is a key focus for H2O.ai, evidenced by strong partnerships with brands like Wells Fargo, Citigroup, Capital One, PayPal, Discover, Dun & Bradstreet, and Equifax (as well as the three companies mentioned in this eBook).



See how AI can help your business.