Improved financial inclusion for at least 1 billion people around the world
Automated Credit Scoring Using Digital Data

- Introduction - Importance of Big Data and Financial Inclusion
- About Lenddo
- Building Features using Digital Data
- Lenddo Credit Scoring
- Lenddo Verification
- Applying Data to Financial Services: Case Studies
- New Model Development
Today credit is impossible for most financial institutions

2.5Bn people do not have access to formal credit today from any of the 30,000+ financial institutions globally

Source: The World Bank, Brookings
The Fourth Industrial Revolution and FinTech are fundamentally changing financial services
Many of underserved are coming online

<table>
<thead>
<tr>
<th>Total Population</th>
<th>Internet Users</th>
<th>Active Social Media Users</th>
<th>Unique Mobile Users</th>
<th>Active Mobile Social Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3Bn</td>
<td>3.4Bn</td>
<td>2.3Bn</td>
<td>3.7Bn</td>
<td>1.9Bn</td>
</tr>
<tr>
<td>54% urbanization</td>
<td>46% penetration</td>
<td>31% penetration</td>
<td>51% penetration</td>
<td>27% penetration</td>
</tr>
</tbody>
</table>

Source: We Are Social
Enabling More Applicants to be visible
About Lenddo

Lenddo drives predictive analytics in banking

- World leader in **Identity Verification** and **Credit Scoring technology** using non-traditional data solutions
- Founded in 2011, successfully operated online lending platforms in three countries for 4 years
- Excels in **model building** including the collection, analysis and processing of billions of data points
- Powers over **2.5 million instant credit decisions** in 21 countries

Leverage Opt-in Mobile and Social Data

Algorithm and TrustGraph Network Effects

Enhanced Customer Relationship
Building the Solution

About Lenddo

Machine Learning

Latent Dirichlet Allocation
Multiple Cox Regression
NLP
Markov Network

2.6 billion data records
12,000+ variables
300+ features
15 best features

Good

Bad

Verification
Scoring 874
Lenddo Suite of Products and Services

LENDING IN A BOX

MARKETING INSIGHTS

CREDIT SCORING

VERIFICATION

MULTI-USE LENDDO PLATFORM

Originate360

Decisioning360

About Lenddo
Credit Scoring: Non-Traditional Data

Approve more applicants and reduce risk by combining traditional data with new data to improve existing scorecards and complement traditional underwriting tools.
Many barriers

- Need a physical ID (usually government) which people may not have
- Face to Face requirement can be subjective and subject to abuse
- Erroneous details being updated in the system without sufficient supporting documents
  - KYC documents being misplaced
- Cumbersome and time consuming document collection process
### Reviewing KYC via Dashboard

#### Verification Details for Client ID 'CS0856167'

![Verification Details](image)

<table>
<thead>
<tr>
<th>Verification Type</th>
<th>Application Form Details</th>
<th>UMID</th>
<th>Driver's License</th>
<th>Company ID</th>
<th>SocialVerify</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Name</td>
<td>Mervin Joseph Alvarez</td>
<td>Verified</td>
<td>Select</td>
<td>Select</td>
<td>-</td>
</tr>
<tr>
<td>Date of Birth</td>
<td>February 28, 1980</td>
<td>Select</td>
<td>Select</td>
<td>Select</td>
<td>-</td>
</tr>
<tr>
<td>Residential Address</td>
<td>Unit 3621 Cityland, Makati</td>
<td>Select</td>
<td>Select</td>
<td>Select</td>
<td>-</td>
</tr>
<tr>
<td>Employer</td>
<td>iScale Solutions</td>
<td>Select</td>
<td>Select</td>
<td>Select</td>
<td>-</td>
</tr>
<tr>
<td>University</td>
<td>University of the Philippines Los</td>
<td>Select</td>
<td>Select</td>
<td>Select</td>
<td>-</td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:mjalvarez@gmail.com">mjalvarez@gmail.com</a></td>
<td>Select</td>
<td>Select</td>
<td>Select</td>
<td>-</td>
</tr>
<tr>
<td>Primary Mobile Number</td>
<td>0926-9119111</td>
<td>Select</td>
<td>Select</td>
<td>Select</td>
<td>Not Verified</td>
</tr>
</tbody>
</table>

**Dashboard / Verification**

[Back to list]  [Save and Next]  [Save]
Background:
Lenddo client is a Telco with 45mil subscribers of which over 90% are pre-paid. Our client strategy is to convert them into postpaid subscribers. The case study is focus on a deployment of Lenddo Verification for walk-in customers who wish to apply for Postpaid packages (line + handset).

Challenges:
• Lack of credit data on target demographic
• Lack of documentation historically required by client
• Speed and cost and error rate of manual verification
• Poor customer experience
Focus on underbanked in South Korea

- A Microcredit Bank
  - Uses of Lenddo scoring solutions to provide loans to low-income/credit group
  - Builds with Lenddo an alternative credit rating based financial platform
  - Selected as one of the top ten winners of Google Impact Challenge in 2016
Focus on Smallholder Farmers

• Digitizing Data:
  ✓ seed expenses
  ✓ fertilizer expenses
  ✓ livestock
  ✓ revenues
  ✓ plot dimensions
  ✓ personal details

• To create bespoke models combining:
  ✓ Weather data
  ✓ soil conditions
  ✓ typical vegetation levels for a specific area

Lenddo uses the information gathered from farmers to build predictive credit models that financial institutions could use to provide loans.
Leverage from Big Data – New Models

- Income Proxy Model – predictive model to define range of income of thin-file, self-employed, freelance applicant for loan sizing, marketing, LTV
- Collection Model – behavior pattern to determine time/methods/places best to contact to collect/follow up
- Early Warning Model – to safeguard against potential default
- Propensity to Claims – for insurance industry
- Propensity to Staff Turnover – to reduce hiring/training costs for agent-based industry
Thank you!