

MICHIGAN STATE
UNIVERSITY

Beta Presentation

Surge xOS: Visualization of Automated Underwriting

The Capstone Experience

Team Surge Solutions

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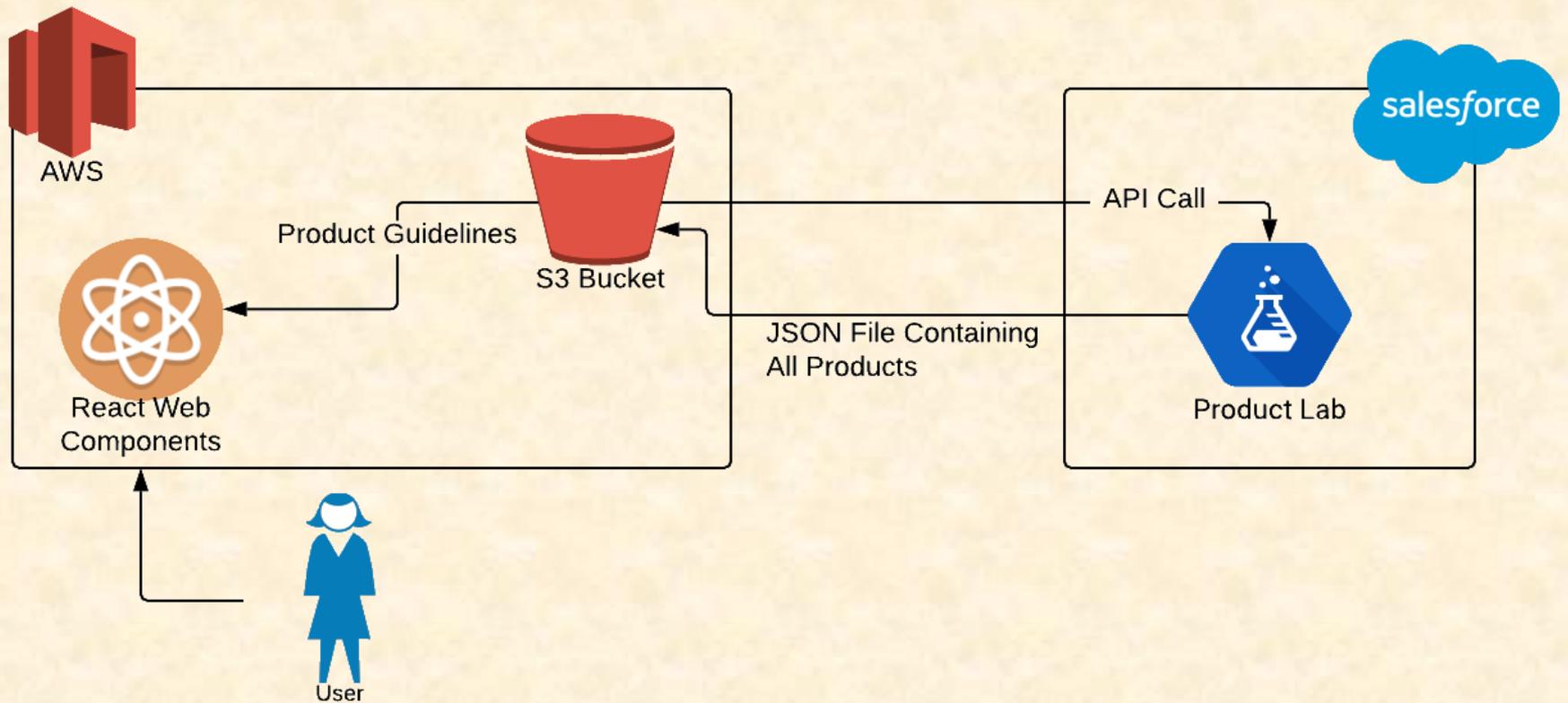
*From Students...
...to Professionals*

Project Overview

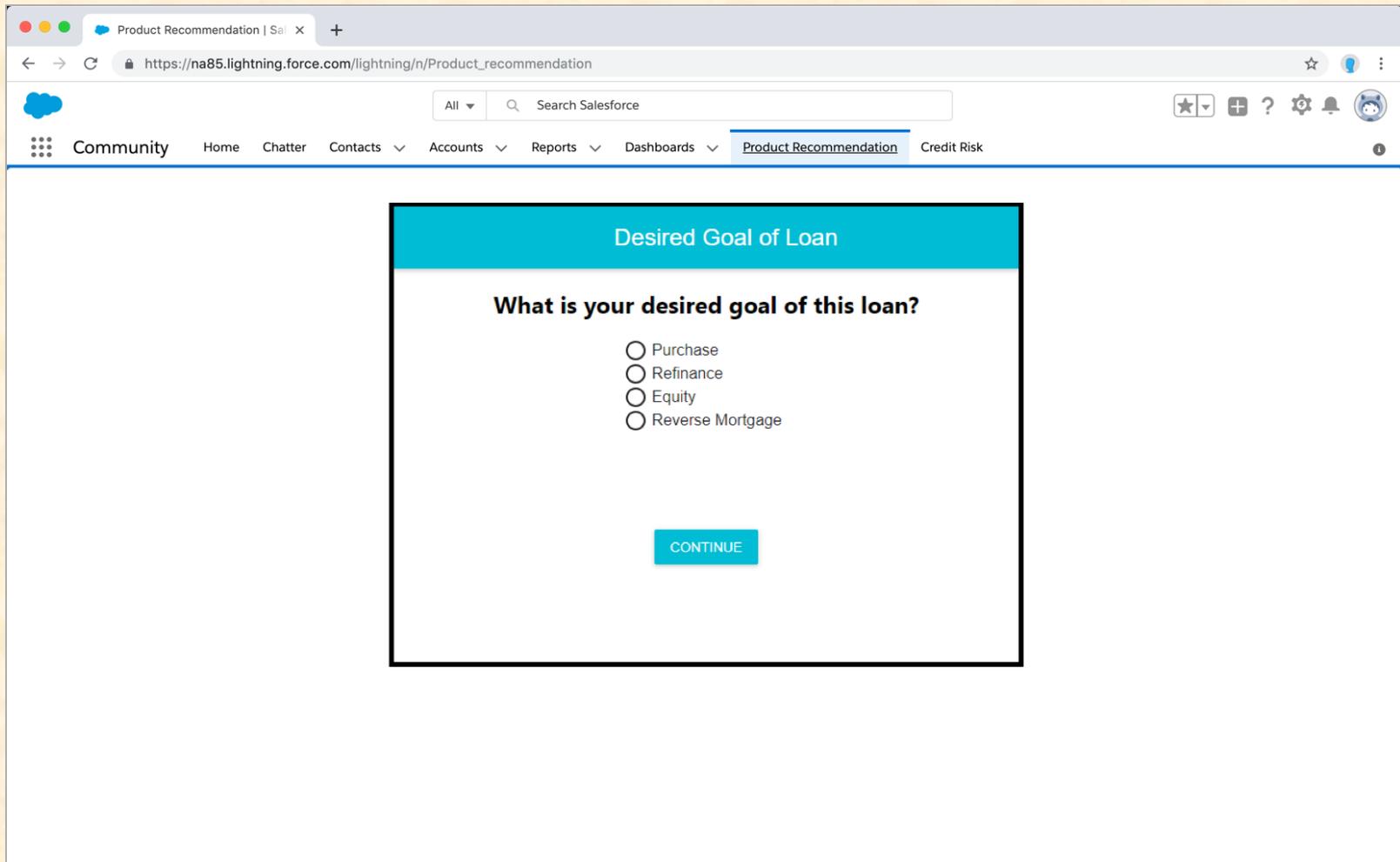
- Make Loan Underwriting Process Fast and Accurate
 - Recommend products directly to customers
 - Allow loan officers to easily view eligible products
- Enable Lenders to Visualize and Adjust Financial Products
 - How the risk and net benefit of a financial product changes as the product policy changes



System Architecture



Product Recommendation



The screenshot shows a web browser window with the URL https://na85.lightning.force.com/lightning/n/Product_recommendation. The page is part of the Salesforce interface, with a navigation bar at the top containing 'Community', 'Home', 'Chatter', 'Contacts', 'Accounts', 'Reports', 'Dashboards', 'Product Recommendation', and 'Credit Risk'. The main content area features a form with a teal header 'Desired Goal of Loan'. Below the header, the question 'What is your desired goal of this loan?' is displayed. There are four radio button options: 'Purchase', 'Refinance', 'Equity', and 'Reverse Mortgage'. A teal 'CONTINUE' button is positioned at the bottom of the form.

Product Recommendation | Sal x +

← → ↻ 🔒 https://na85.lightning.force.com/lightning/n/Product_recommendation ☆ 👤 ⋮

☁️ All 🔍 Search Salesforce

☰ Community Home Chatter Contacts Accounts Reports Dashboards Product Recommendation Credit Risk ⓘ

Desired Goal of Loan

What is your desired goal of this loan?

- Purchase
- Refinance
- Equity
- Reverse Mortgage

CONTINUE



Product Recommendation

The screenshot shows a Salesforce interface for product recommendations. The browser address bar indicates the URL is https://na85.lightning.force.com/lightning/n/Product_recommendation. The Salesforce navigation bar includes 'Community', 'Home', 'Chatter', 'Contacts', 'Accounts', 'Reports', 'Dashboards', 'Product Recommendation', and 'Credit Risk'. The main content area is divided into three sections:

- Recommended Product:** A 30-Year Fixed-Rate FHA mortgage, represented by a bank icon. The details are:

Interest Rate	2.2500 %
APR	2.7826 %
Monthly Payment	\$ 993.84

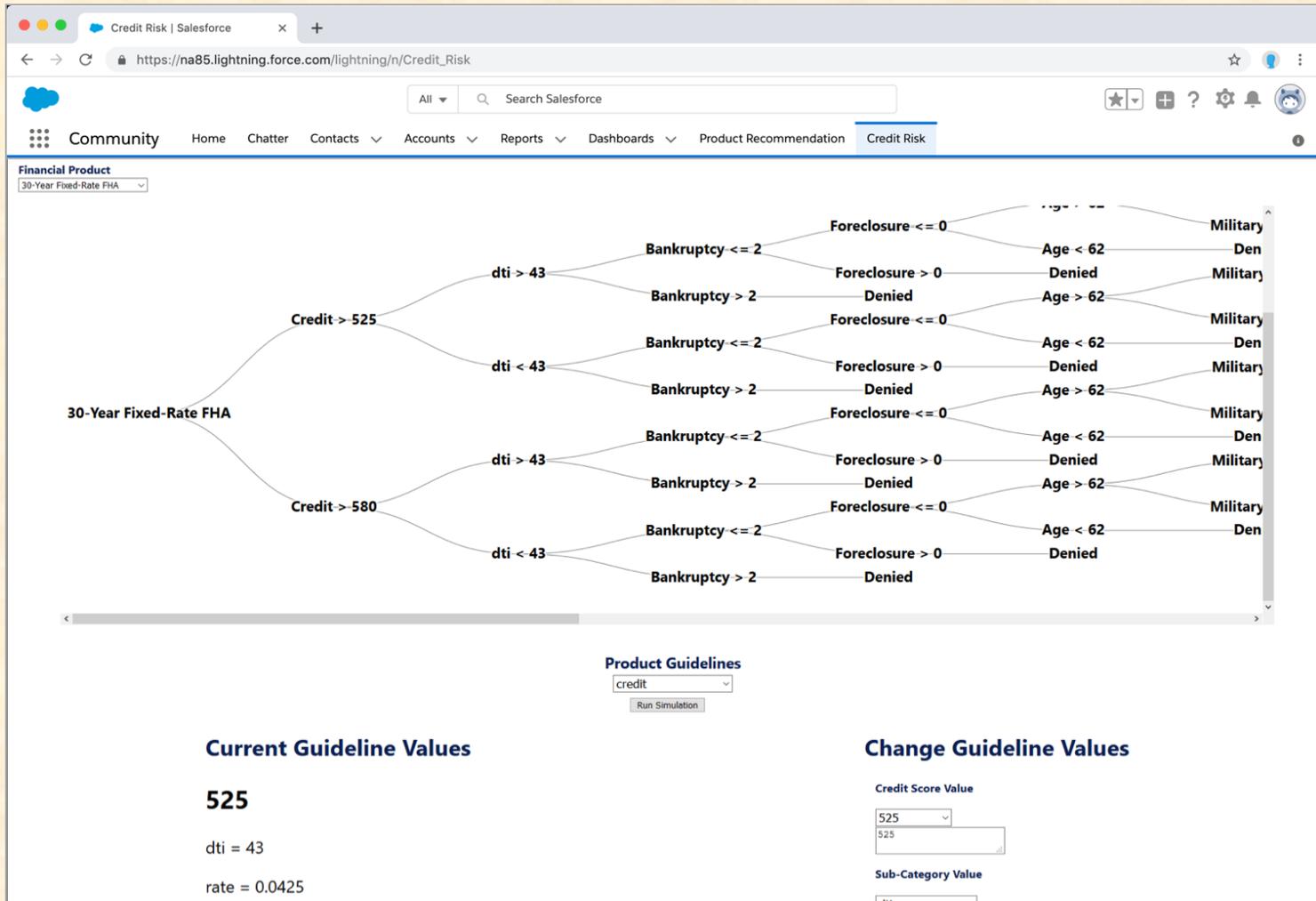
Rates are based on a \$300000 home loan with 13.3333% down.
- Alternative Products:** Two mortgage options, each with a bank icon:
 - 30-Year Fixed-Rate:**

Interest Rate	4.1250 %
APR	4.4211 %
Monthly Payment	\$ 1260.09
 - 20-Year Fixed-Rate:**

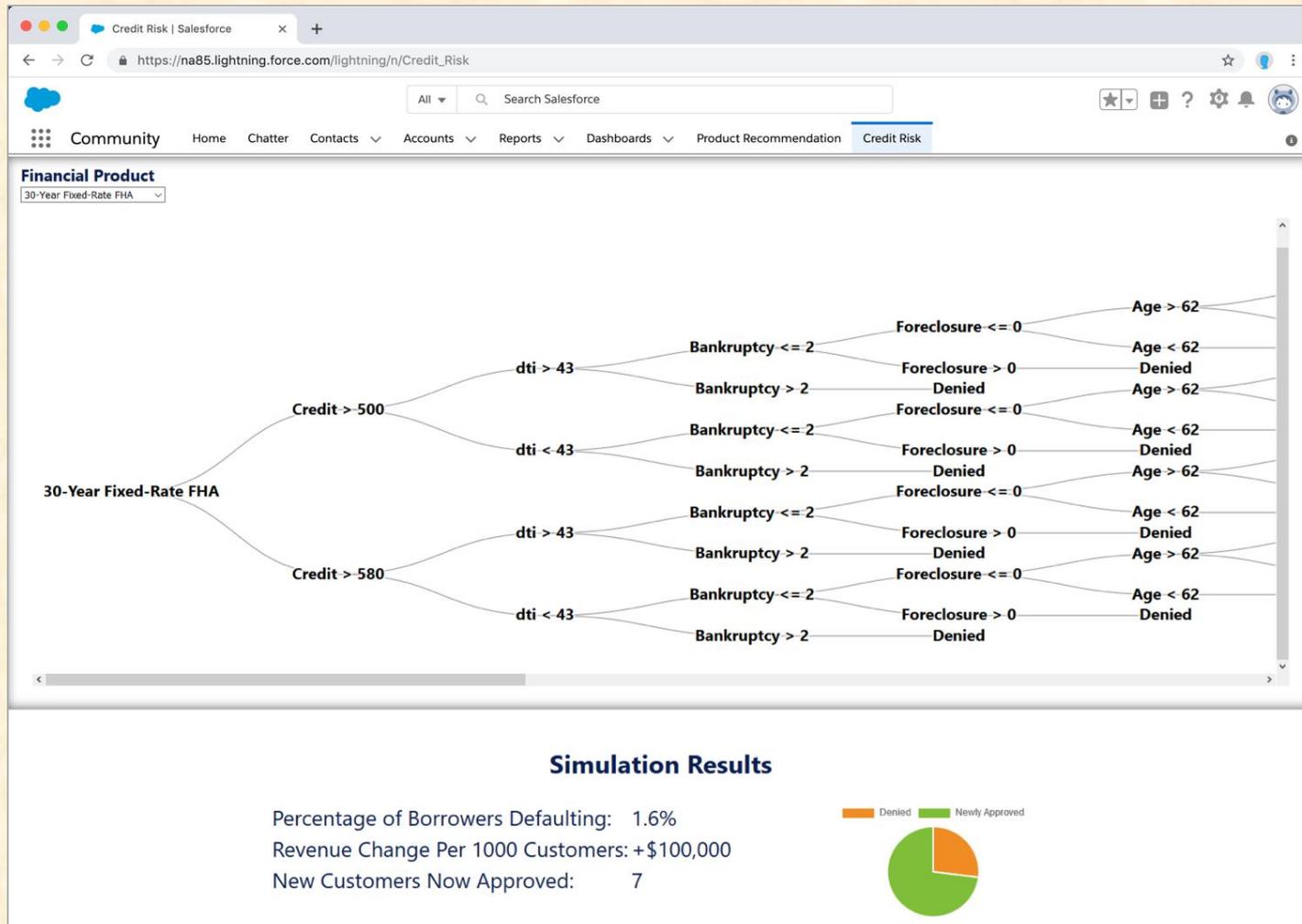
Interest Rate	3.7250 %
APR	4.4654 %
Monthly Payment	\$ 1538.13



Credit Risk Analysis



Credit Risk Analysis



What's left to do?

- Bug Fixes in Both Applications
- Refine Salesforce Implementation
- Improve Monte Carlo Simulation
- Update UI to fit with Salesforce Lightning Design System



Questions?

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