

Consent Form

In the following study, you will be interacting with a set of loan applications. We ask you to solve **4 cases** within the application. You will be presented with one case at a time, which will be followed by the A.I. prediction, indicating whether the loan should be **ACCEPTED or REJECTED**.

The prediction in each case will be explained with an auto-generated diagram. You can either **agree** or **disagree with the prediction** provided by AI for each case, based on your personal assessment of the case.

The study should take you around 15 minutes to complete.

- The purpose of this study is to gather data on how people make judgments about AI predictions and XAI (Explainable AI) explanations.
- There are no foreseeable risks associated with participating in this study. However, if you feel uncomfortable at any point, you may withdraw without any penalty.
- Your data will be anonymized, and any identifying information will be removed to ensure your privacy.
- The data collected will be stored securely and only accessible to the researcher.

If you have any questions about this study, please contact:
Soobin Chae, at s.chae@students.uu.nl

Thank you for your time and participation.

By clicking the button below, you consent to participate in this study under the terms described above.

- ☐ I consent, begin the study
- ☐ I do not consent. I do not wish to participate



You will now review a set of loan applications along with AI predictions indicating whether the loan should be **Accepted** or **Rejected**.
The AI system used for these decisions has a **63% accuracy** rate.

Applicant 1 Process Map & Applicant Profile

This map shows the journey of a loan application through the bank's system. The right shows the applicant details.

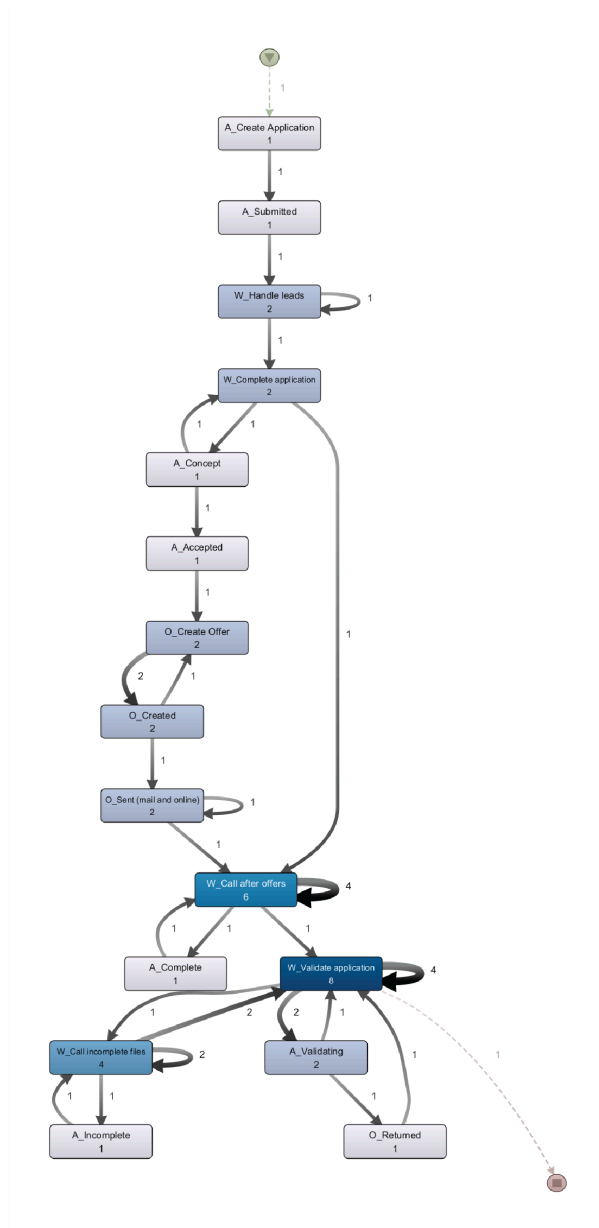
You can [zoom in](#) to see more details.

- **Starting Point:** The process begins at "**A_Create Application**," where the applicant submits their application.
- **Current Status:** The last step was "**W_Validate Application**," where the bank checks the documents received from the applicant.
- **Duration:** This process has taken around **8 days**.

How to Read the Map (for more details: [link](#))

Activities (Boxes): Represents a step in the loan application process.

- **A_ (Application):** Steps related to the application process.
- **O_ (Offer):** Steps related to creating and handling credit offers.



Applicant Profile	
Age	57
Income	47600
Requested Amount	5000
Credit Score	600
Employment Status	Permanent
Loan Goal	Home improvement

- **W_ (Work):** Work activities by bank employees.
- **Number inside box:** Times this step has been performed.

Arrows: Show the sequence of actions.

- **Looping arrows:** Indicate repeated steps.
- **Numbers next to arrows:** Times transitions or repetitions occur.

Based on this **application process** and the **applicant's profile**, the AI predicts that the application will be **ACCEPTED** after the last activity.

Do you agree with the AI Prediction of '**Accept Application**'?

- ☐ Agree
- ☐ Disagree

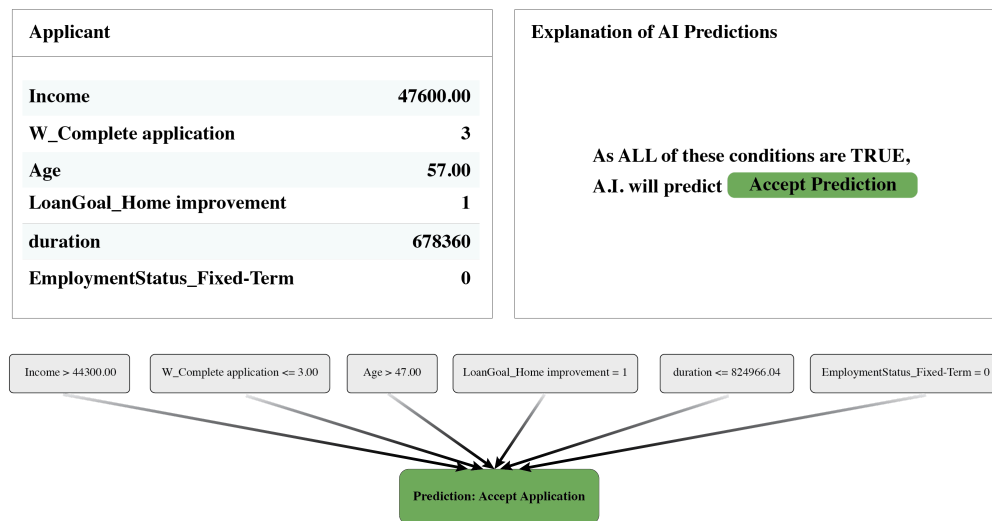
How confident are you with your decision on a scale of 1-5? (1- Not confident at all, 5- Very confident)

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Understanding AI's Decision (AI Explanation)

This figure shows why the AI made its prediction based on specific rules.



* Some of the values may differ from the process map due to the way the AI is trained.

Understanding AI's Prediction

- **Left Box:** Shows the applicant's specific details like income, age, and duration.
- **Right Box:** Indicates the final prediction, which is "Accept Application" in this case.
- **Bottom Boxes:** Lists the specific rules that led to the AI's decision.

After you have seen the AI Explanation, do you agree with the AI Prediction of '**Accept Application**'?

- ☐ Agree
☐ Disagree

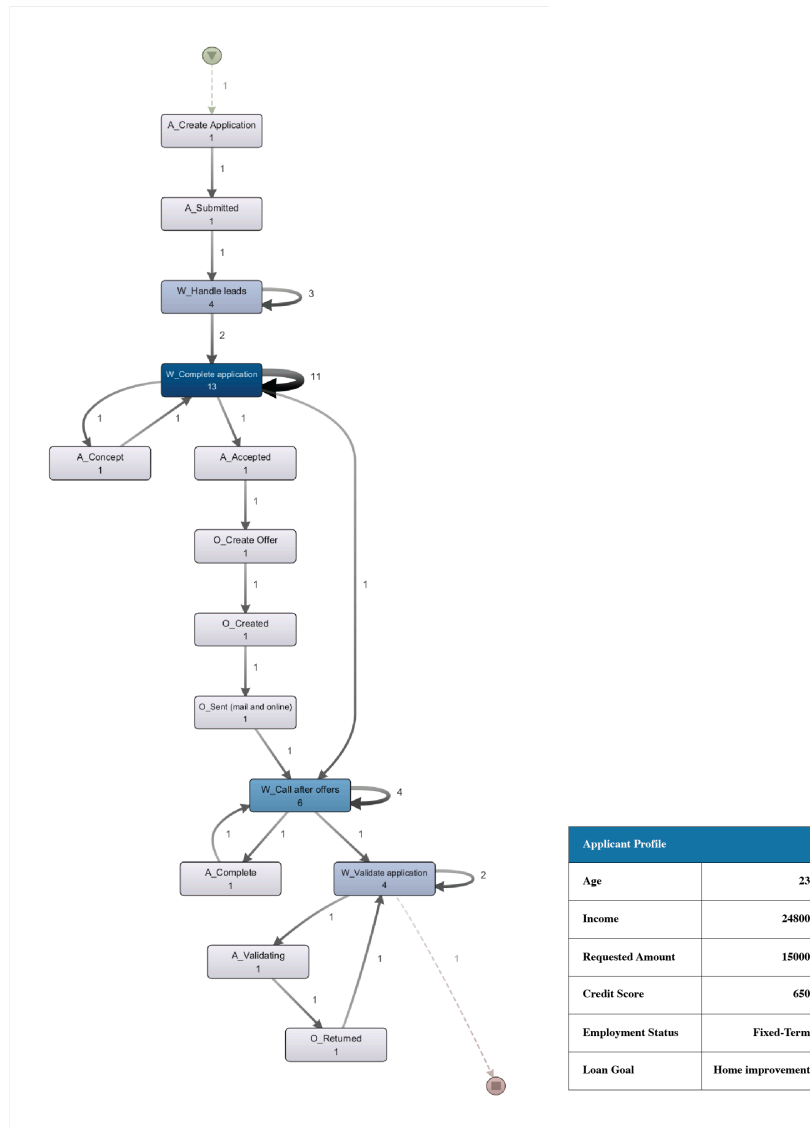
After you have seen the AI Explanation, how confident are you with your decision on a scale of 1-5? (1- Not confident at all, 5- Very confident)

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Applicant 2 Process Map & Applicant Profile

* This is the 2nd applicant with the new information.

- **Starting Point:** A_Create Application
- **Current Status:** W_Validate Application
- **Duration:** 15 days



(for more details: [link](#))

Based on this **application process** and the **applicant's profile**, the AI predicts that the application will be **REJECTED** after the last activity.

Do you agree with the AI Prediction of '**Reject Application**'?

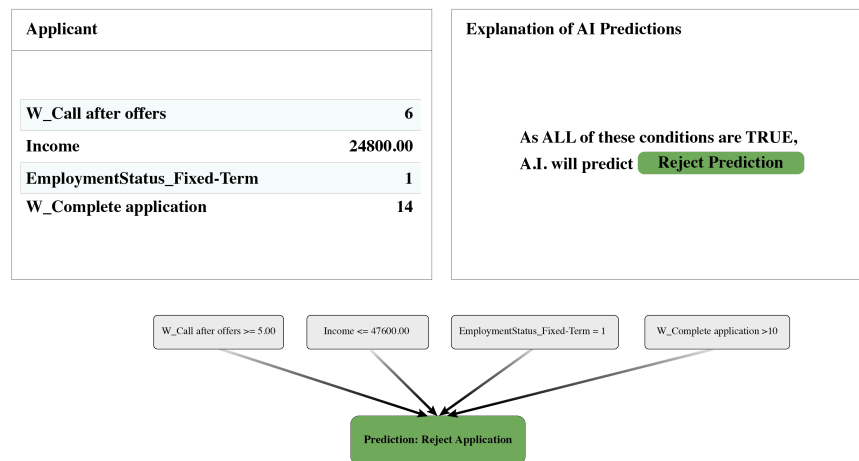
- ☐ Agree
- ☐ Disagree

How confident are you with your decision on a scale of 1-5? (1- Not confident at all, 5- Very confident)

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Understanding AI's Decision (AI Explanation)

This figure shows why the AI made its prediction based on specific rules.



After you have seen the AI Explanation, do you agree with the AI Prediction of '**Reject Application**'?

- ☒ Agree
- ☐ Disagree

After you have seen the AI Explanation, how confident are you with your decision on a scale of 1-5? (1- Not confident at all, 5- Very confident)

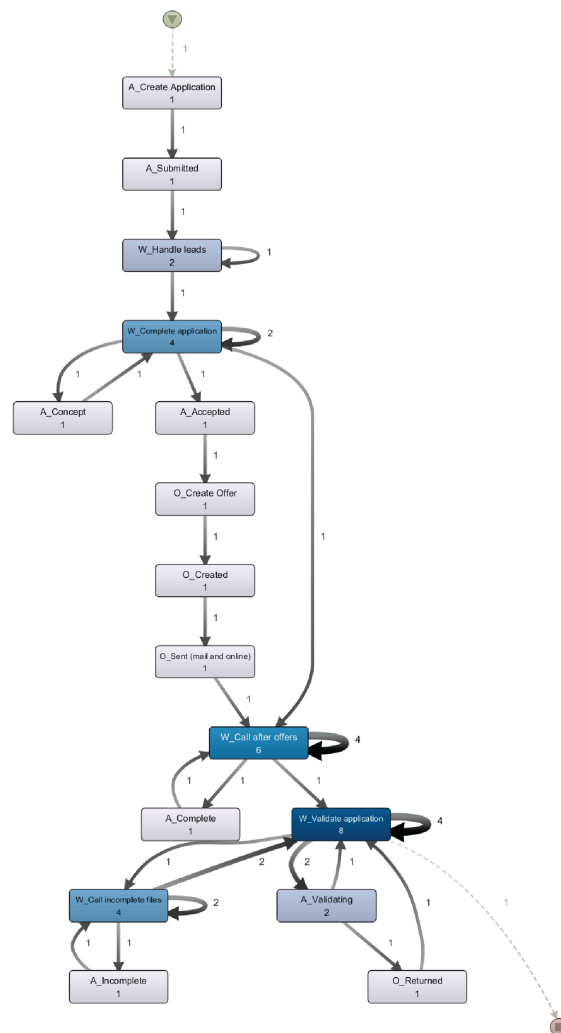
1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Applicant 3 Process Map & Applicant Profile

* This is the 3rd applicant with the new information.

- **Starting Point:** A_Create Application
- **Current Status:** W_Validate Application
- **Duration:** 37 days



Applicant Profile	
Age	27
Income	44400
Requested Amount	42500
Credit Score	700
Employment Status	Permanent
Loan Goal	Existing loan takeover

(for more details: [link](#))

Based on this **application process** and the **applicant's profile**, the AI predicts that the application will be **REJECTED** after the last activity.

Do you agree with the AI Prediction of '**Reject Application**'?

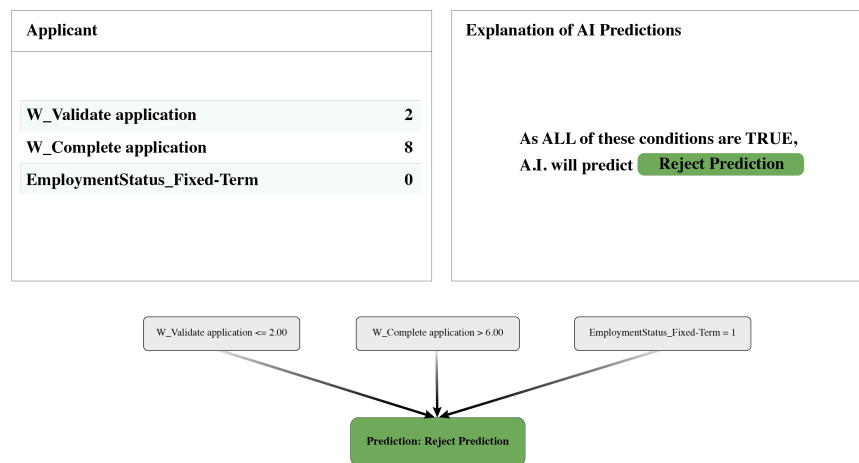
- ☐ Agree
☐ Disagree

How confident are you with your decision on a scale of 1-5? (1- Not confident at all, 5- Very confident)

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Understanding AI's Decision (AI Explanation)

This figure shows why the AI made its prediction based on specific rules.



After you have seen the AI Explanation, do you agree with the AI Prediction of '**Reject Application**'?

- ☐ Agree
- ☐ Disagree

After you have seen the AI Explanation, how confident are you with your decision on a scale of 1-5? (1- Not confident at all, 5- Very confident)

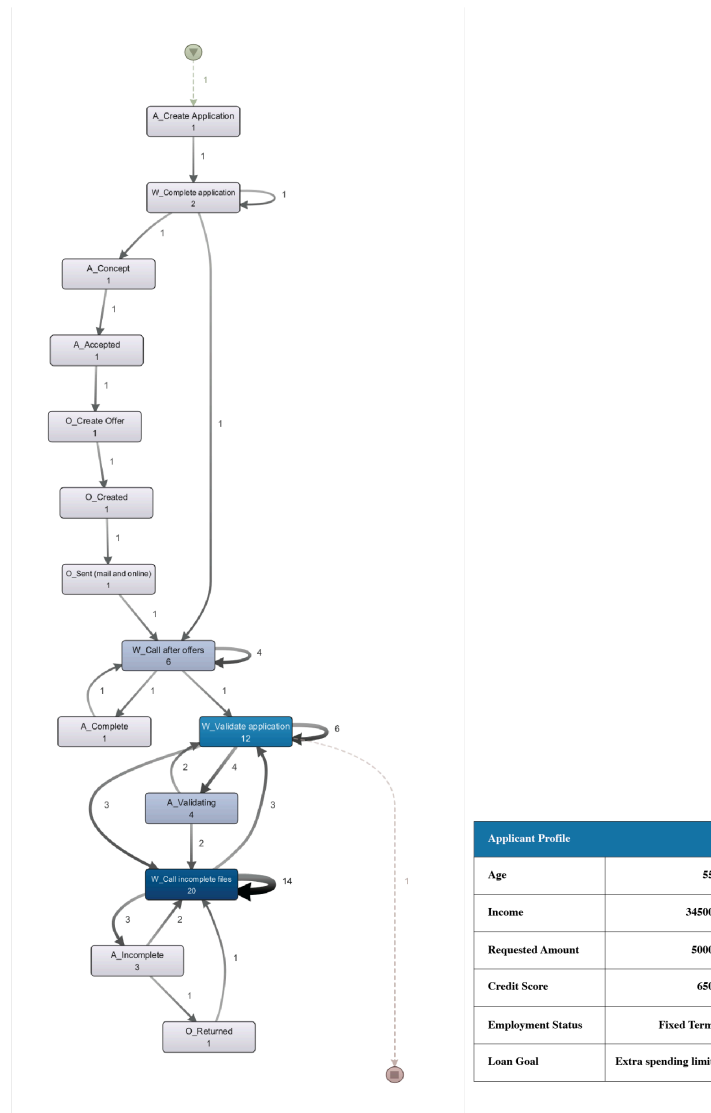
1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Applicant 4 Process Map & Applicant Profile

* This is the 4th applicant with the new information.

- **Starting Point:** A_Create Application
- **Current Status:** W_Validate Application
- **Duration:** 25 days



(for more details: [link](#))

Based on this **application process** and the **applicant's profile**, the AI predicts that the application will be **ACCEPTED** after the last activity.

Do you agree with the AI Prediction of '**Accept Application**'?

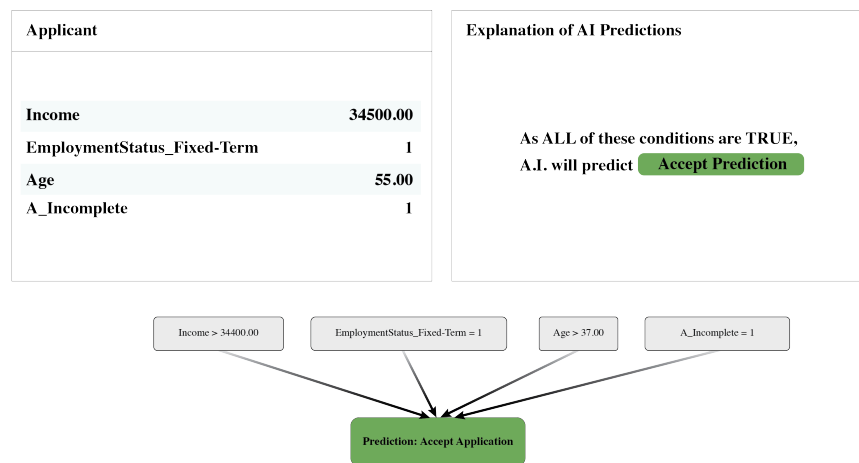
- ☐ Agree
☐ Disagree

How confident are you with your decision on a scale of 1-5? (1- Not confident at all, 5- Very confident)

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Understanding AI's Decision (AI Explanation)

This figure shows why the AI made its prediction based on specific rules.



After you have seen the AI Explanation, do you agree with the AI Prediction of '**Accept Application**'?

- ☐ Agree
- ☐ Disagree

After you have seen the AI Explanation, how confident are you with your decision on a scale of 1-5? (1- Not confident at all, 5- Very confident)

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Please rank the following information in terms of how much it helped you in making a decision in general.



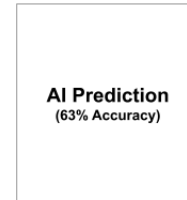
Process Map

Applicant Profile	
Age	23
Income	24800
Requested Amount	15000
Credit Score	650
Employment Status	Fixed-Term
Loan Goal	Home improvement

Applicant's Profile



AI Explanation



AI Prediction

Process Map

Applicant's Profile

AI Explanation

AI Prediction

How difficult was it in understanding AI Explanation?

- ☐ Extremely difficult
- ☐ Somewhat difficult
- ☐ Neither easy nor difficult
- ☐ Somewhat easy
- ☐ Extremely easy

How well are you satisfied with the explanations provided by the loan application on a scale of 1-5?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Can you think of any possible improvements of the explanations provided by the loan application in order to improve AI Explanation understandability?

Any comments?

What is your highest educational degree?

- ☐ High School
- ☐ Bachelor or equivalent
- ☐ Master or equivalent
- ☐ Ph.D. or higher

Do you have a background in science, technology, engineering, or mathematics (STEM)?

- ☐ Yes
- ☐ No

How long have you worked with explainable AI (XAI)?

- ☐ Never worked with it
- ☐ Less than 1 year
- ☐ 1 - 2 years
- ☐ 2 - 3 years
- ☐ 3 - 5 years
- ☐ 5 + years

How long have you worked with Process Mining?

- ☐ Never worked with it
- ☐ Less than 1 year
- ☐ 1 - 2 years
- ☐ 2 - 3 years
- ☐ 3 - 5 years
- ☐ 5 + years

We thank you for your time spent taking this survey.
Your response has been recorded.

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