

LSPrec - User Manual

Website: <https://lsprec.vercel.app>

GitHub Repository: github.com/MalavyaRaval/LSP

1. Abstract

LSPrec (Logic Scoring of Preferences Recommender System) helps people make smarter decisions. The systems help user look at different options side by side. This way, the user can pick the one that really matches what they want most.

LSPrec stands apart from those expert-only programs, it works for nonprofessional users. No need for any tech skills or math background at all. You could compare job offers that come your way. Or check out cars you are thinking about buying. Even homes on the market fit right in.

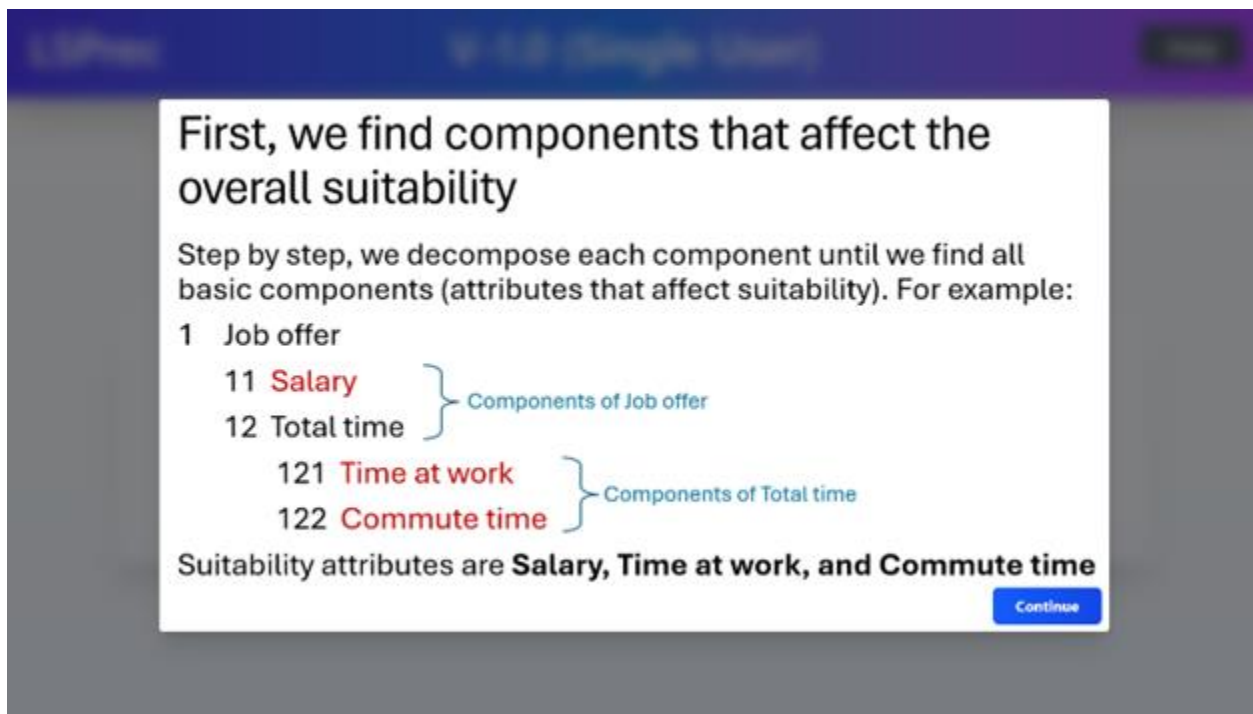
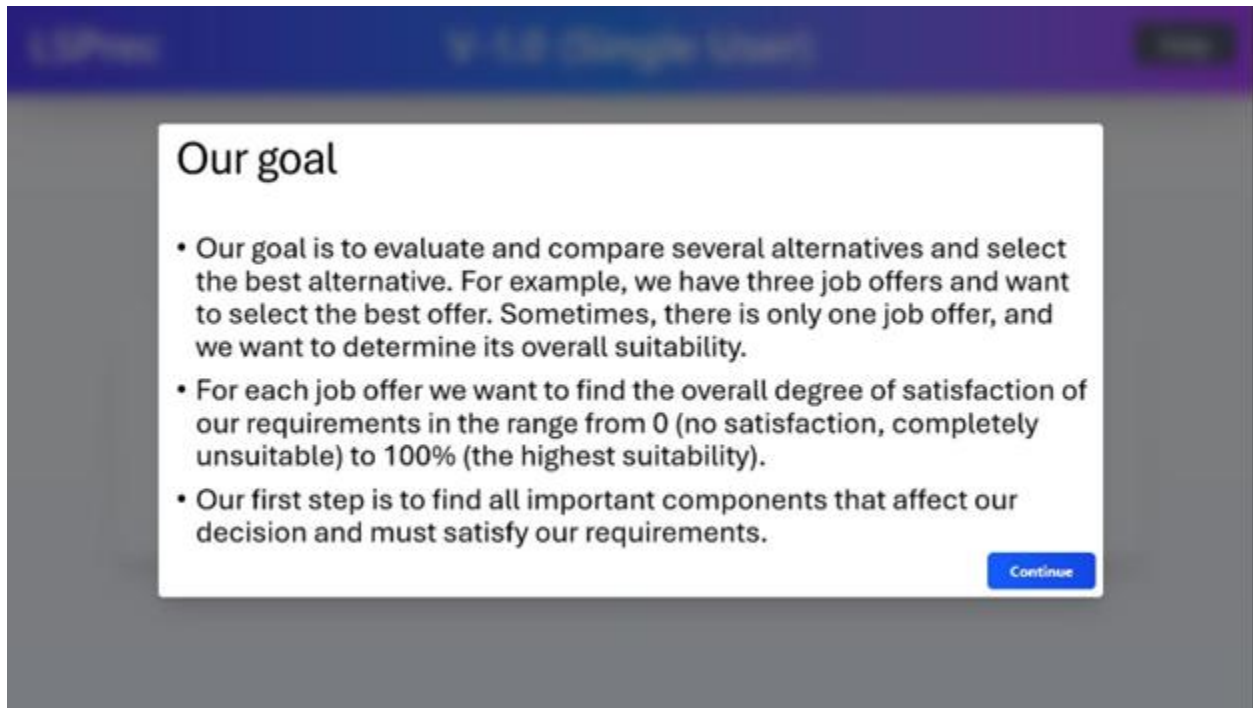
The setup takes you along with simple steps. First, you must build a model for your decision. Then, you check out each choice against it. In the end, you see straightforward results in percentages. Those numbers tell you exactly how each option lines up with your own tastes.

2. Main Features

- **Guided Step-by-Step Process:** The website asks you simple questions and helps you build your decision model naturally.
- **No Technical Setup:** You only enter what matters to you your criteria, preferred values, and alternatives.
- **Logical Evaluation:** Uses the Logic Scoring of Preference (LSP) method behind the scenes to calculate suitability percentages.
- **Transparency:** You can see exactly the percentage that each criterion contributes to the final score.
- **Flexible Use:** Run one-time evaluations as a guest or create an account to save and revisit your projects.

3. Getting Started

When you visit <https://lsprec.vercel.app/>, you will see a welcome screen and a start button for making decisions by firstly being introduced by the 3 images that will help understand the system before using it:

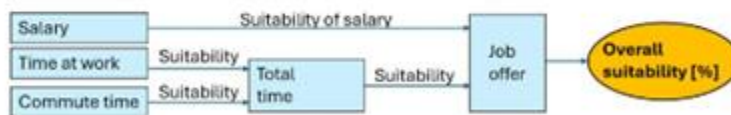


Then, we specify requirements and compute the overall suitability. The best offer has the highest suitability.

- For each component we first specify our requirements:

COMPONENT	IMPORTANCE	CRITERION	RANGE
Salary	Very high	Preferred high values	\$min - \$max
Weekly time at work	High	Preferred low values	40h - 72h
Daily commute time	Medium	Preferred low values	20min - 90 min

- For each component LSPrec computes its suitability degree
- At the end, LSPrec combines component suitability degrees and computes the overall suitability degree (from 0 to 100%):



Continue

Then you can choose either:

1. Single-Time User (As a single time user, you can use the application without logging in. Your data will not be saved.)
2. Registered User (As a registered user, you can create an account, log in, and save your progress and data for future use.)

You can start by creating a new project or by looking at existing projects by other users.

4. Navigation and Saving

Use:

- Continue → move to the next step.
- Back → return to the previous one.

All your inputs are automatically saved as you progress. Registered users can save projects for later or modify them anytime.

5. Steps to create a new project

Step 1: Define Your Goal

State what you want to evaluate.

Example: “Job Offers,” “Cars,” “Homes,” or other items.

You can compare multiple options (e.g., Job Offer A, Job Offer B, and Current Job) or assess just one.

Step 2: Identify Components

List all key factors that affect your choice. These are called *attributes*.

For a job offer, for instance:

1 JOB

11 Monetary compensations

111 Offered starting salary [%]

112 Anticipated 3-year salary [%]

12 Main characteristics of the job

121 Total time at work

1211 Average work week [h]

1212 Daily commute time [min]

122 Attractiveness of job [0...8]

This forms your decision tree, which organizes how the system will evaluate each part.

Step 3: Set Requirements

For each attribute, specify your preference:

- “I prefer high values” (e.g., higher salary)
- “I prefer low values” (e.g., shorter commute)
- “I prefer a specific range” (e.g., 40-50 work hours per week)

Enter what values you consider unacceptable and what you consider ideal. LSPrec converts this into a satisfaction curve.

Step 4: Combine Criteria

Select the logic condition for combining components:

1. All requirements are mandatory and must be simultaneously highly satisfied
2. High satisfaction of requirements is desirable but not mandatory

3. Desirable good satisfaction of most requirements
4. Components can substitute each other with high values outweighing low values
5. Any single component requirement is sufficient for the complete satisfaction of this criterion
6. Combining mandatory and optional requirements

You also Select the desired degree of simultaneous satisfaction:

- Extreme
- High
- Medium
- Low

You also assign importance levels ranging from 9 (Highest) to 1 (Lowest). You can also select if something is optional or mandatory and choose the impact of optional components. The system uses this to calculate weighted results.

Step 5: Enter Alternatives

Input the data for each alternative.

Example for job offers:

Component Name	Attribute Criteria	NewJob1	NewJob2	Old Job
Offered starting salary [%]	Range: 90-150, preferred high values	125	140	100
Anticipated 3-year salary [%]	Range: 100-130, preferred high values	120	115	100
Average work week [h]	Range: 40-72, preferred low values	45	50	40
Daily commute time [min]	Range: 0-90, preferred low values	0	40	30
Job attractiveness [0...8]	Range: 0-8, preferred high values	7	6	4

Step 6: View Results

After all inputs are complete, LSPrec calculates the Overall Suitability for each option (0-100%).

Results are presented in a color-coded table along with the percentage that it can satisfy:

- Green: Strong match
- Yellow: Moderate match
- Red: Low match

You can see how much each attribute contributed to the final score and easily identify which option best fits your requirements.

LSPrec

Evaluation Results

Help

Back to Home

Exit

Add Competitor

Delete Competitor

Modify Competitor

Component Name	Attribute Criteria	NewJob1	NewJob2	OldJob	NewJob1 Suitability	NewJob2 Suitability	OldJob Suitability
JOB OFFER	-	-	-	-	68.32% <div><div></div></div> 68%	76.16% <div><div></div></div> 76%	19.33% <div><div></div></div> 19%
MONETARY COMPENSATION		-	-	-	60.86% <div><div></div></div> 61%	78.76% <div><div></div></div> 79%	16.00% <div><div></div></div> 16%
Offered starting salary [%]	Range: 90-150 preferred high values	125	140	100	60.00% <div><div></div></div> 60%	84.00% <div><div></div></div> 84%	20.00% <div><div></div></div> 20%
Anticipated 3-year salary [%]	Range: 100-130 preferred high values	120	115	100	66.67% <div><div></div></div> 67%	50.00% <div><div></div></div> 50%	0.00% <div><div></div></div> 0%
JOB CHARACTERISTICS		-	-	-	89.94% <div><div></div></div> 90%	73.00% <div><div></div></div> 73%	63.22% <div><div></div></div> 63%
Total time at work	-	-	-	-	90.56% <div><div></div></div> 91%	72.51% <div><div></div></div> 73%	99.52% <div><div></div></div> 100%
Average work week [h]	Range: 40-72 preferred low values	45	30	40	87.50% <div><div></div></div> 88%	75.00% <div><div></div></div> 75%	100.00% <div><div></div></div> 100%
Daily commute time [min]	Range: 0-90 preferred low values	0	40	30	100.00% <div><div></div></div> 100%	66.67% <div><div></div></div> 67%	80.00% <div><div></div></div> 80%
Job attractiveness [0..8]	Range: 0-8 preferred high values	7	6	4	87.50% <div><div></div></div> 88%	75.00% <div><div></div></div> 75%	50.00% <div><div></div></div> 50%