



BioPareto Analyzer Prototype

Introduction and Purpose

Thank you for participating in the evaluation of the BioPareto Analyzer prototype. Your feedback is crucial for validating the system's **Usability, Utility, and Interpretability** as part of this thesis project.

Instructions for the Participant:

1. **There Are No Wrong Answers:** We are testing the tool, not you. If you get confused or stuck, that is valuable information for us.
2. **Complete Tasks Unassisted:** Please attempt to complete each task using only the information available in the application.

1. Accessing the Prototype and Data

A. Application Links

Please use the primary link first. The backup link is provided for redundancy in case the primary server experiences connectivity issues.

Priority	Description	Link
1. Primary Link	Recommended access point. Primary deployment on the University's VM environment.	http://bespin.diinf.usach.cl/
2. Backup Link	Alternative access point. Use only if the primary link is unavailable.	https://pareto-app-328472147869.southamericawest1.run.app/



B. Unique Identifier (Token)

Before starting the tasks, please fill in the first field of the feedback form with your unique, anonymous code.

Component	Description	Format Example
Unique Identifier	This code is used to track your feedback across different evaluation phases and is not linked to your identity.	Bluedog (e.g., [Favorite Color][Favorite Pet])

2. Tasks to be Performed (Usability & Functionality)

Please perform the following tasks sequentially. *Note: Task numbers reflect the key functionalities evaluated.*

N °	Key Functionalities Evaluated	Task Description
1	RF1 (Data Loading) & RF2 (Validation)	LOAD YOUR DATA: Use the application's file upload area to import the Pareto Front test file (example Json file test can be downloaded from home app or also from https://drive.google.com/file/d/1B4iXl5RrhbAaL0ut64U1FMN2nhkkZqHI/view?usp=sharing).
2	RF3 (Visualization) & RF4 (Exploration)	EXPLORE THE SOLUTIONS: Access the Pareto Front module and interact with the graph (zoom, hover over a point) to explore the content of the solutions. Ensure you can see the detailed information (tooltip) of that specific point (e.g., ID, accuracy, number of genes).
3	RF5 (Filters) & RF4 (Exploration)	APPLY A FILTER: Access the Genes module and Filter the solutions so that only those with an Accuracy value greater than 92% and using fewer than 60 genes are displayed.
6	RF9 (Frequent Genes)	CHECK ROBUSTNESS: Access the Genes module and find the visualization that shows the most frequent genes across all the currently filtered solutions.



7	RF13 (Integration) & RF14 (Analysis Results)	INITIATE BIOLOGICAL ANALYSIS: Access the Biological analysis module and use the Functional Analysis functionality to send the genes from the solution selected to the g:Profiler service. Briefly review the results displayed (biological pathways).
8	RF17 (Export)	GENERATE A REPORT: Access the Export module and locate the option to Export Results and generate a report in CSV or JSON format containing the solutions and comments you have selected so far.

3. Submitting Feedback

Once all tasks are completed, please click the link below to access the evaluation form. The form includes sections on Usability, Utility, and a final test of Interpretability (True/False).

Component	Description	Link
Feedback Form	Complete the survey to provide your ratings and comments on the prototype.	https://docs.google.com/forms/d/e/1FAIpQLSce9m_bDB4CZGTiHQLVkf2YKw-zk4Xb4I_csMHKT0ASbzT5Aw/viewform?usp=sharing&ouid=110513719981144773360