Web-based simplex plot ECG visualiser Survey

Survey Objective

This survey aims to understand the needs and preferences of medical students and researchers regarding ECG visualization tools. Your feedback will help us develop a web-based, lightweight, and modular ECG visualization solution.

Section 1: Basic Information

1.1 What is your current academic/professional level?

- ☐ Undergraduate student
- ☐ Graduate student (Master's)
- ☐ Doctoral student (PhD)
- ☐ Medical researcher
- ☐ Faculty/Professor
- ☐ Other: _____

1.2 Have you worked with ECG data or related analysis?

- ☐ Yes
- ☐ No

1.3 Are you familiar with PhysioNet database or WFDB format?

- ☐ Yes
- ☐ No
- ☐ I've heard of it but not familiar

Section 2: Current Needs and Pain Points

2.1 Have you used ECG visualization tools before? (e.g., LightWAVE, WaveformECG, etc.)

- ☐ Yes
- ☐ No

2.2 How would you rate existing ECG visualization tools? (Select all that apply)

Rate each aspect on a scale of 1-5 (1=Poor, 5=Excellent):

- **Ease of use:** [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- **Data format support:** [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- **Analysis capabilities:** [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- **Visualization options:** [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- **Image export functionality:** [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

2.3 Do you find current tools too complex for non-technical users?

- ☐ 1 (Strongly Disagree)
- ☐ 2 (Disagree)
- ☐ 3 (Neutral)
- ☐ 4 (Agree)
- ☐ 5 (Strongly Agree)

2.4 Would you prefer to view ECG data directly through a web browser without installing software?

- ☐ 1 (Strongly Disagree)
- ☐ 2 (Disagree)
- ☐ 3 (Neutral)
- ☐ 4 (Agree)
- ☐ 5 (Strongly Agree)

Section 3: Acceptance of Ternary Plot (Multi-variable Visualization)

3.1 Are you familiar with ternary plots or simplex plots?

- ☐ Yes, I understand them well
- ☐ I've heard of them but don't understand
- ☐ No, I'm not familiar

3.2 Would you use a tool that allows you to upload pre-processed three-variable data and quickly generate ternary plots?

- ☐ 1 (Definitely not)
- ☐ 2 (Probably not)
- ☐ 3 (Maybe)
- ☐ 4 (Probably yes)
- ☐ 5 (Definitely yes)

3.3 Are you interested in comparing ternary plot results across multiple samples or experimental groups?

- ☐ 1 (Not interested)
- ☐ 2 (Slightly interested)
- ☐ 3 (Somewhat interested)
- ☐ 4 (Very interested)
- ☐ 5 (Extremely interested)

Section 4: Feature Preferences and Interaction Methods

4.1 Please rate the importance of the following features for your work (1=Not important, 5=Very important):

Feature	1	2	3	4	5
Upload ECG data and view multi-lead waveforms					
Display statistical information (RR intervals, sampling rate, etc.)					
Upload CSV files and generate ternary plots					
Compare multiple files side by side					
Customize point styles (color/shape/size)					
Select to plot all data points or only specific subsets (filtered by labels or ranges)					
Export images in various formats					
Provide help documentation and sample data					

Section 5: Overall Expectations and Feedback

5.1 What is the most critical feature for your ECG visualization needs?

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[Please provide your response in the text box below]
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5.2 What additional features would you like to see in this tool?

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[Please provide your response in the text box below]
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5.3 Would you be willing to participate in beta testing if this tool becomes available?

☐ Yes, I'm interested in testing

☐ No, thank you

If yes, please provide your email address for future contact:

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Email: _____
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Thank You!

Thank you for taking the time to complete this survey. Your feedback is invaluable in helping us develop a tool that meets the needs of the medical research community.

Survey completion time: Approximately 5-7 minutes

Contact information for questions: k24022294@kcl.ac.uk

This survey is designed to gather insights for the development of an ECG visualization tool. All responses will be kept confidential and used solely for research and development purposes.