

ThetaFlow: Measuring Cognitive Load with BCI

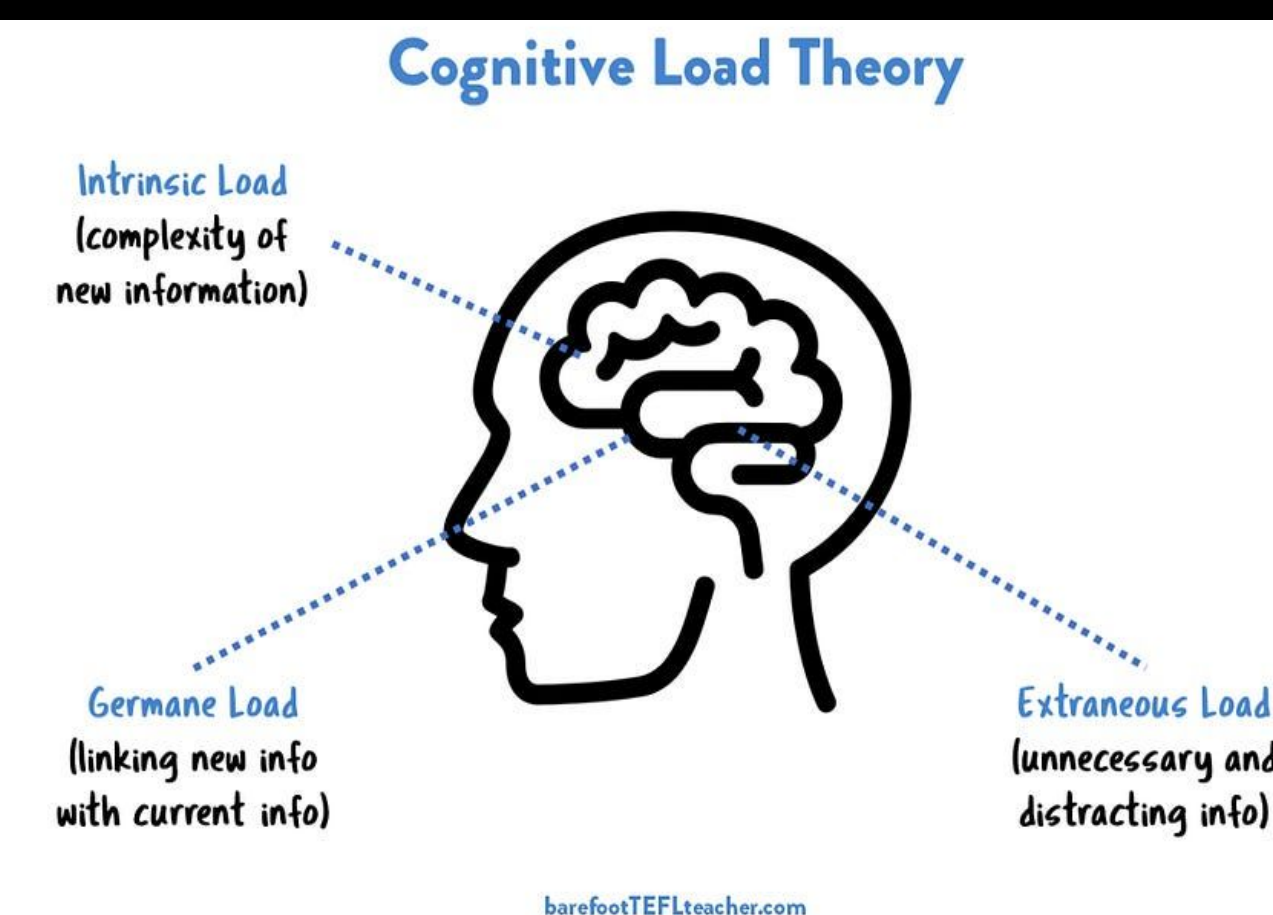
Martin Bourdev, Akshyae Singh, Amanda Dankberg, Kylie Bach, Daniel Bielin, Adelyne Tran, Kyra Sunil



Introduction

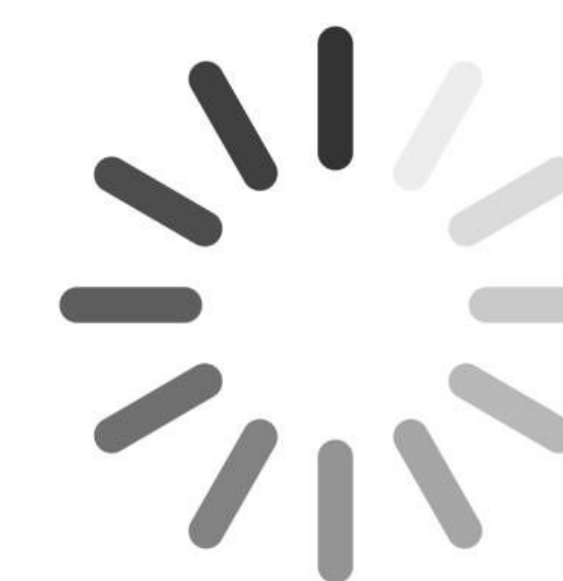
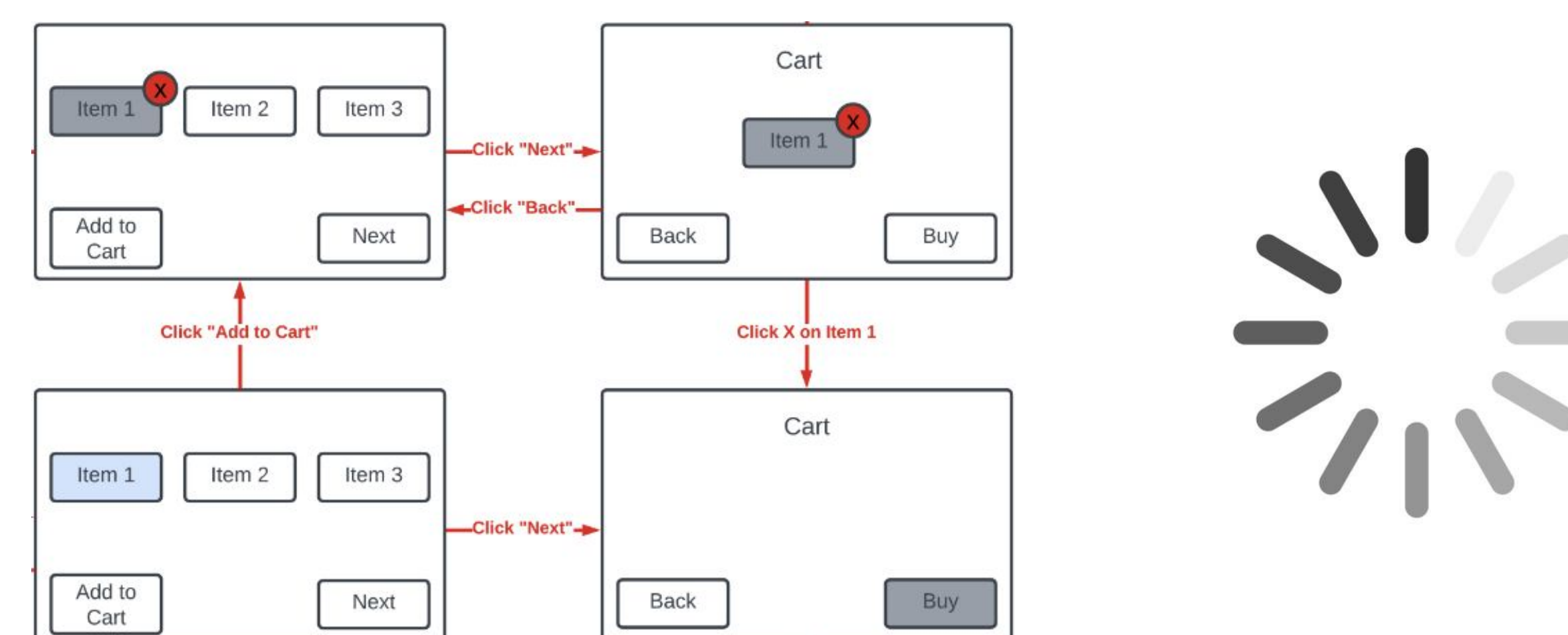
Goal: Improving Product Design with Objective Measurement of Cognitive Load

- EEG-based measurement of cognitive load
- Real-time classification and quantification
- Graphical user interface for testing and evaluation
- Optimizing design to minimize cognitive effort
- Empowering companies to improve user experience.

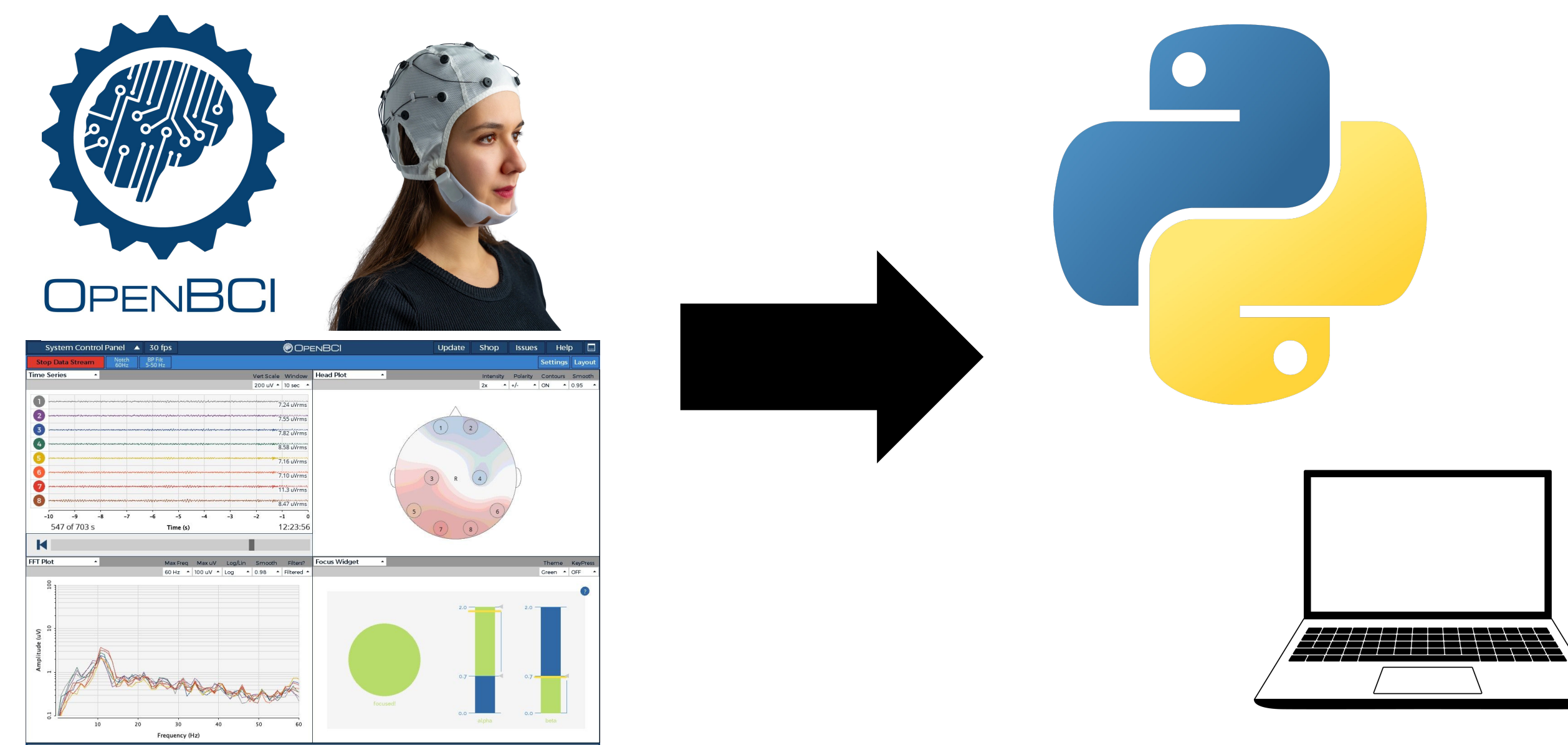


Methods

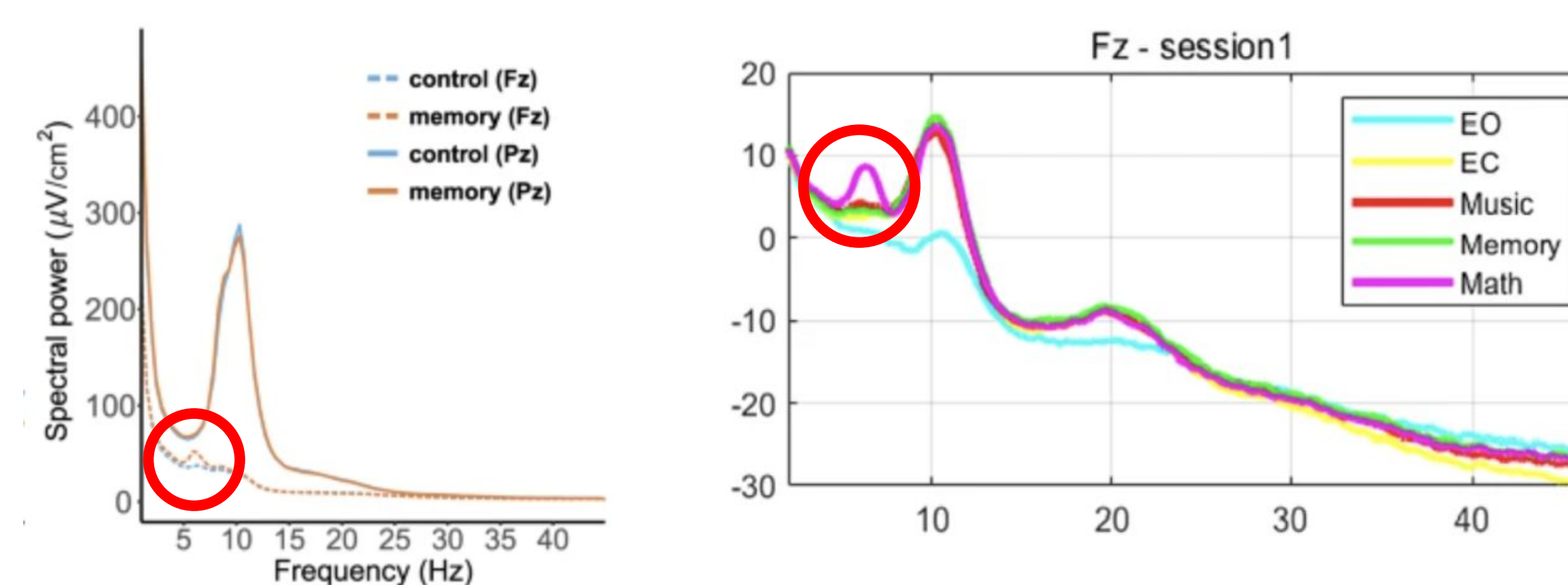
Graphic User Interface



Data Collection



Classification



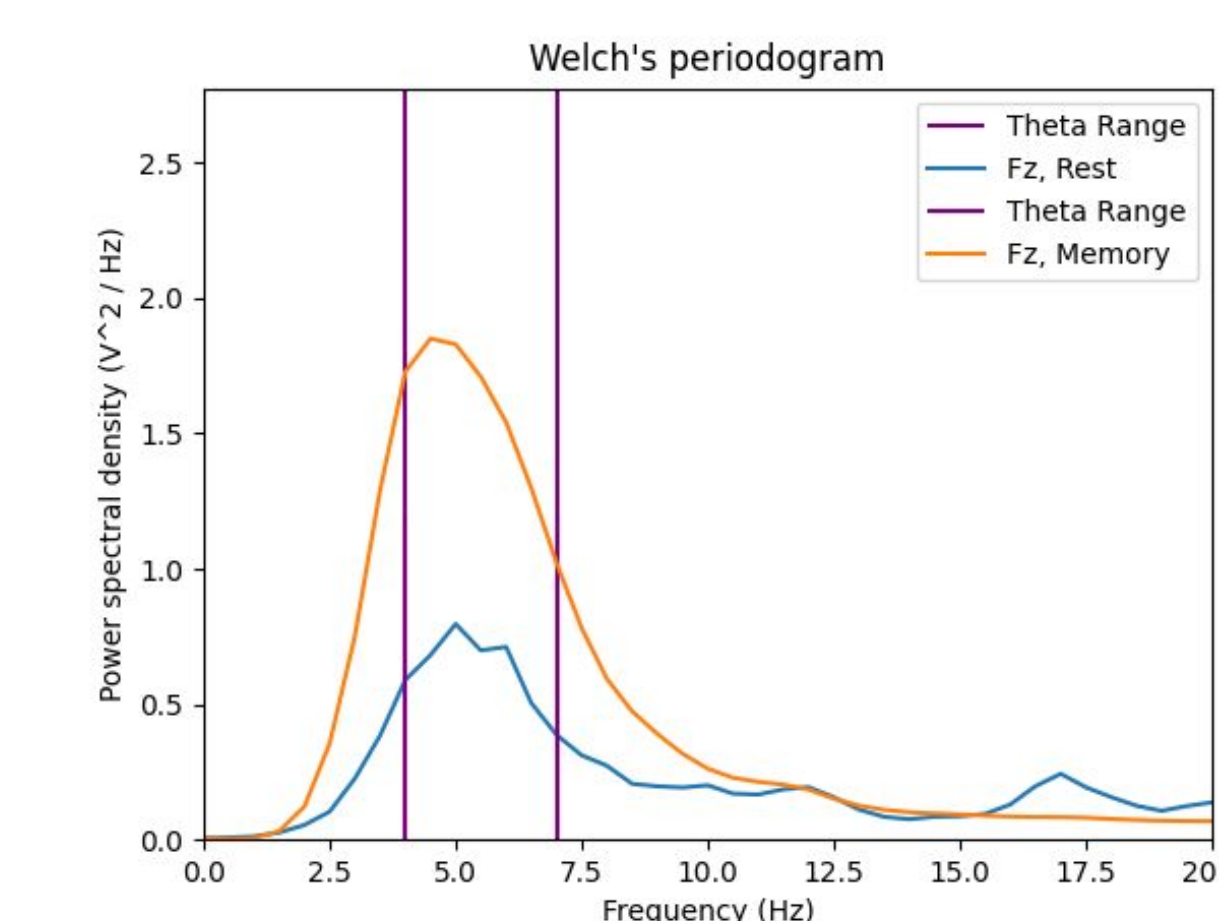
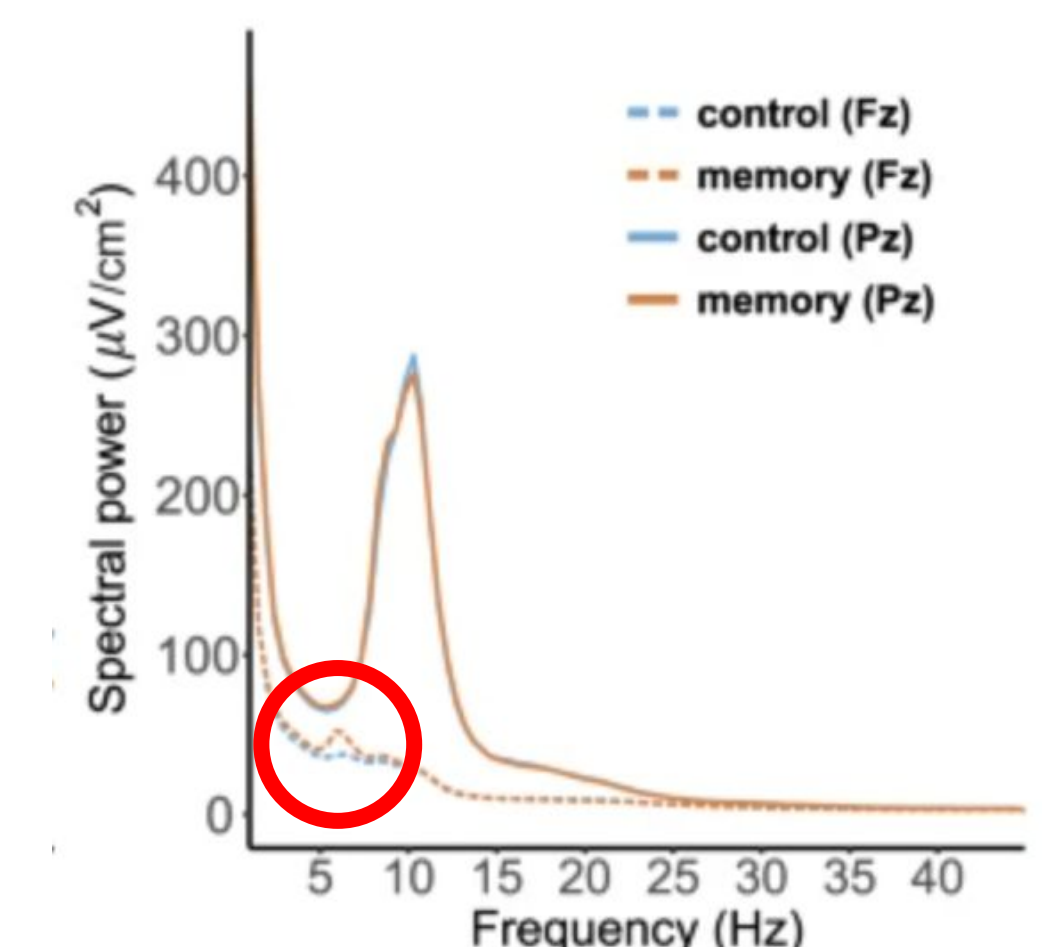
Yuri Pavlov, 2021

Yulin Wang, 2022

4-7 Hz: Theta Wave Power Spikes During Cognitive Load

Results

2021 Study by Yuri Pavlov



Our Analysis of Pavlov's Data

WHY ThetaFlow?

Good Design = User Satisfaction = Business Success

Siegel+Gale: "We Believe in the Power of Simplicity"



57%

Premium

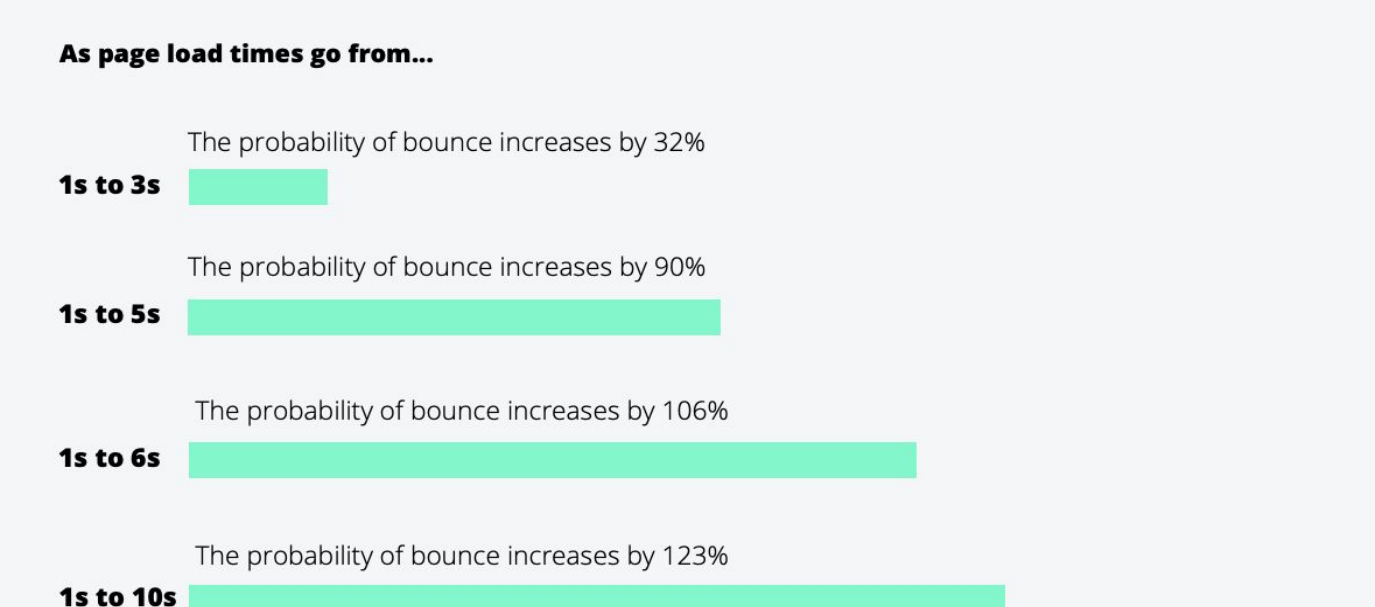
The percentage of consumers willing to pay more for simpler experiences

76%

Loyalty

The percentage of consumers who are more likely to recommend a brand because it provides simpler experiences and communications

Deloitte: "Milliseconds make Millions"



Conclusion

In the future, businesses can use **ThetaFlow** to:

- Test design ideas
- Measure user experience
- Build products that are simple and intuitive

Now, more than ever, consumers demand simplified brand experiences. And they will reward brands that deliver them.

—Siegel+Gale Brand Strategy

