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Introduction to Psychophysics with Python

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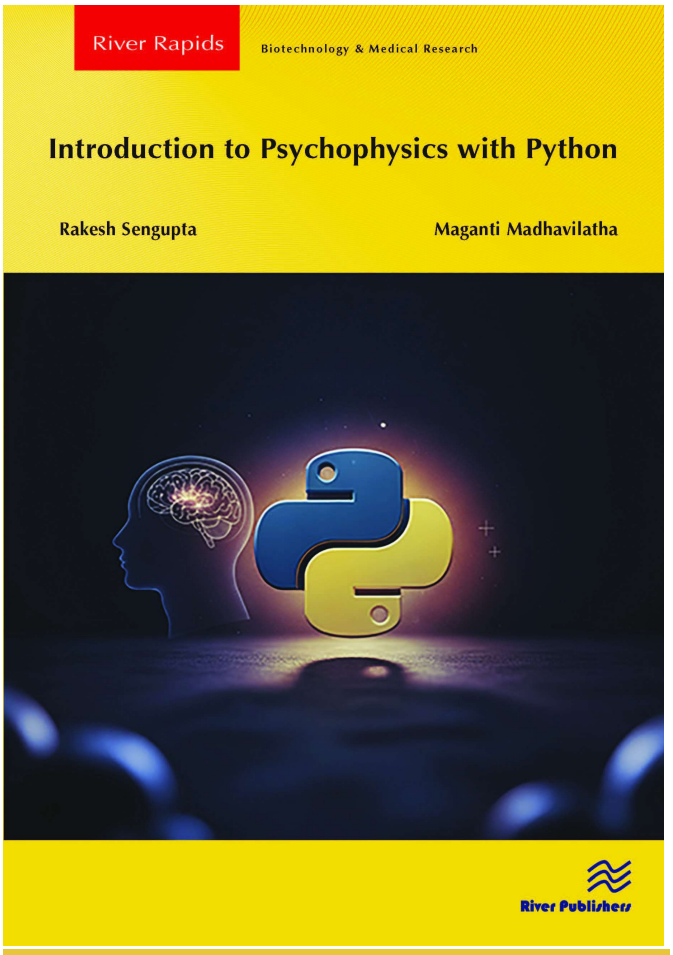

Introduction to Psychophysics with Python is a hands-on guide to exploring how we sense and perceive the world—powered by modern Python programming. Bridging classical theory with today's computational tools, it equips students and researchers to design, run, and analyze psychophysical experiments with confidence.
Starting from the foundations laid by Weber, Fechner, and Stevens, the book traces the evolution of psychophysics into contemporary practice. Readers gain a clear grounding in sensory physiology, experimental design, and statistical analysis, always tied to the central challenge: connecting physical stimuli to perceptual responses and making sense of the data.

What sets this book apart is its practical, step-by-step approach. Through tutorials and annotated code using **PsychoPy** , readers learn Python essentials—loops, conditionals, data handling—while building real experiments. These skills extend seamlessly into advanced methods like curve fitting, bootstrapping, and statistical inference.

Illustrated with intuitive explanations, diagrams, and thought-provoking exercises, the book blends conceptual clarity with real-world application. By the end, readers will not only understand the principles of psychophysics but also have the coding expertise to create and analyze their own experiments—opening the door to deeper insights into sensation and perception.
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- History of Psychophysics
- Understanding Sensory Systems
- Signal Detection Theory and Experimental Design
- Using PsychoPy to Build Experiments

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