

A/B Testing, Version 1.5

eCommerce Experimentation Simulation

Challenges users to design and analyze real-world experiments that drive data-driven marketing and product decisions. Through hands-on testing and competition, students develop practical intuition for experimentation, optimization, and the application of machine learning in business strategy.

Learning Objectives

- A/B Testing strategy
- Analyzing customer data and statistics
- eCommerce decision making

Program Usage

- 2022-Present
- Wharton Interactive
 - Executive Education
 - Global Youth Program

Author

Kartik Hosanagar, Alex Miller

Roles/Players

Single-player practice, Single- or Multi-player tournament

Play Style

Synchronous or Asynchronous, in-class, remote, and solo play (*limited*)

Target Audience

Ideal for programs in business and marketing analytics, data-driven decision making, business applications for machine learning

Additional Materials

Facilitator quick start guide, user quick start guide, introduction and debrief slides, teaching note, and user and facilitator introduction videos

Approximate Time Required

Introduction: 10 minutes
Practice Play (*optional*): 60 minutes
Simulation Play: 50 minutes
Debrief: 40 minutes

Delivery Logistics

- Solo-play in the “practice stage” and unlimited teams in the “tournament stage”
- Works best when teams can separate into breakout rooms during the tournament stage

Synopsis

The A/B Testing Simulation teaches users how to design, run, and interpret randomized experiments to guide data-driven product and marketing decisions. Set in an eCommerce environment, players act as Nano’s Director of eCommerce as they test website components to increase smartphone sales, balancing the trade-off between acting quickly on limited data and gathering more information for better accuracy. Through a practice mode and a competitive tournament mode, players experience how A/B testing applies to real-world business strategy without requiring advanced statistics. The simulation emphasizes practical experimentation over traditional hypothesis testing and shows how machine learning methods tackle similar optimization challenges, ultimately building players’ intuition for evidence-based decision-making and the value of fostering a culture of experimentation.