

OTREE - AN OPEN-SOURCE PLATFORM FOR LABORATORY, ONLINE AND FIELD EXPERIMENTS

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Abstract oTree is an open-source, online, and object-oriented software platform for implementing social science experiments be they laboratory, online or field experiments or combinations thereof. oTree is cloud-based and does not require installation of software on subjects' devices. Subjects can be using desktops, tablets or smartphones running different operating systems. This facilitates usage in online and field settings, and allows bring-your-own-device approaches. Not requiring specific hardware also enables replication at low cost by others. Deployment can be internet-based without a shared local network, or conversely local network based without internet access. oTree uses industry standard, open-source technologies like HTML5 and Python. With HTML5 the usual internet-range of graphical elements, form inputs, sound, and video can be employed. Python is the most popular programming language for beginners and taught at most universities, which allows researchers to tap into a large pool of programming talent. Creating experiments can be learned quickly, especially by those already familiar Python. oTree.org offers a library of standard games, which can be used for teaching or as templates for experiments. A player can be simulated with an oTree bot. Bots can simulate thousands of game plays to check game logic and programming. Using bots, even multi-player games can be put online as supplementary, interactive material.

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