Bots are Users, Too! Rethinking the Roles of Software Agents in HCI

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ABSTRACT

Increasingly sophisticated autonomous software agents called 'bots' roam throughout the Internet, performing a wide variety of tasks, some for good and some for evil. Yet while autonomous, these bots are not artificial intelligences, instead programmed to perform mundane, routine tasks that would otherwise be impossible by humans. Useful bots crawl the web for search engines, enforce order in IRC channels, patrol for spam in Wikipedia, while malicious bots target systems, impersonate humans in chat rooms, and spam blogs and comment threads. Much research has focused on inhibiting these malicious bots, with CAPTCHAs used to verify that a user is human. [1]

While bots are built by HCI researchers and practitioners, there has not been as much attention on enabling these more useful bots, many of which constitute a core part of the communities they inhabit. In Wikipedia, for example, hundreds of bots perform a variety of tasks that have made and continue to make the encyclopedia what it is today. [2] Most notably, Wikipedia's counter-vandalism bots work alongside human volunteers in a fast-paced mode of collaboration that distributes complex, cognitive tasks across ad-hoc groups of human and bot users. [3] Yet this is only possible because powerful APIs have been developed and made accessible to bot developers. Given the powerful contributions that bots can make as participants to communities like Wikipedia, this paper argues that we must consider the non-human agents who populate our systems as users, striving for familiar concepts like usability, but for bots as well as humans.

BODY

Bots are users of systems just as humans are. HCI practitioners must not forget to design for both bot-computer and human-bot interaction.

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