

Collaborative Battleship

Semester project

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Description

It is crucial for electronic commerce websites such as Amazon or eBay to understand users' behaviour by having a good model of the users' preferences. Websites use this model in different ways such as to increase revenues by targeting customers, to motivate users to give interesting product reviews, ...

The goal of this project is to investigate the preferences of the users and their behaviour in electronic commerce websites. Usually, this is done by conducting a user study.

Instead of defining a traditional user study, we wrap the study into an interactive and fun video game. This technique of *gamification* [2], where we use game design elements in non-game contexts, allows us to conduct a user study and collect data from users while they are playing a game. This approach increases user engagement and data quality [1].

The idea is to extend the famous game *Battleship* [3] to a multiplayer setting in which we will be able to study the interaction between users, and learn and model users' behaviour. Battleship is a very well-known game where a player guesses the location of the opponent's ships and try to destroy them. The original version is a two-player pencil and paper game, but we want to make an online multiplayer version.

The description of the user study is left vague on purpose. Contact me for more details...

Tasks

1. Design and implement the Collaborative Battleship game.
2. Collect data from the players.
3. Analyse the data and model players' behaviour.

Benefits

- Implement your own game.
- Learn about web development framework.
- Understand users' behaviour on an electronic commerce website.

Skills

- Good programming skills in Java.
- Experience in web development is a plus.

- Some knowledge in probability and statistics.

References

- [1] Meng-Chieh Chiu, Shih-Ping Chang, Yu-Chen Chang, Hao-Hua Chu, Cheryl Chia-Hui Chen, Fei-Hsiu Hsiao, and Ju-Chun Ko. Playful bottle: a mobile social persuasion system to motivate healthy water intake. In *Proceedings of the 11th international conference on Ubiquitous computing*, 2009.
- [2] Sebastian Deterding, Rilla Khaled, Lennart E. Nacke, and Dan Dixon. Gamification, toward a definition. In *Proceedings of the CHI 2011 Gamification Workshop*, 2011.
- [3] Wikipedia. The Battleship Game. [http://en.wikipedia.org/wiki/Battleship_\(game\)](http://en.wikipedia.org/wiki/Battleship_(game)). [Online; accessed 15 May 2013].