

Targeted Advertising With Total User Privacy

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Abstract

It is common for free platforms on the internet to use targeted advertising as a revenue stream, but this usually comes at the cost of user privacy. In this paper we propose a method of targeting advertising to users of an online platform without any of their data being collected or accessible. Broadly, this technique combines deep reinforcement learning (to learn user preferences) with cryptography (to prevent others, including the platform administrators, from accessing any private user data). Furthermore, we propose an algorithm which allows multiple platforms to benefit from these learned preferences while still maintaining these privacy claims.

1 Introduction

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If

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