

Algorithmic foundations and ethics in AI: from theory to practice course

Toolkit for synchronous sessions

CU2 | AI privacy and convenience
Case study

Case study



Case study

Description for trainers

	Description	Comments
Task description	This session aims to help students understand the fundamentals of privacy and convenience, especially in daily life activities such as smart home devices, mobile apps, and online shopping. It will involve interactive discussions, reflections, and activities to reinforce the learning.	
Description of how to do the task	Present the case study.	See the instructions and guidelines on the next pages.
Estimated time to do the task	30-40 minutes.	
Suggestion of sources for doing the task	Web search on incidents related to privacy breach or data leaks.	
Detailed description of how to deliver the task	Group discussion + Google forms.	Please see the suggested questions for Google forms in the document: CU2_CaseStudy_Tentative_questions_for_google_forms.docx
Information on the deadline for the task delivery	During the synchronous session.	
Contact information or how to clarify doubts	The teacher must provide a form of contact (it could be an email address, a telephone number...)	

Case study

Fictional case for students

Case Study: Online Shopping and Personalized Ad Suggestions

A university student, John frequently shops online for various items, ranging from textbooks and electronics to clothing and groceries. He enjoys the convenience of having products delivered to his doorstep and appreciates the personalized shopping experience provided by online retailers.

One day, John saw an advertisement for a personal item he had only briefly searched for on an e-commerce site appear on his social media feed. This incident made him realize how extensively his online activities were tracked and shared across different platforms.

Discussion Points

- What are the potential risks of extensive data collection by e-commerce platforms?
- How can e-commerce companies improve transparency and privacy protections for their customers?
- What alternative ways exist to achieve a personalized shopping experience without extensive data tracking?
- How can users balance the need for convenience with the need for privacy in the context of online shopping?



IMAGE SOURCE

<https://www.truthmedia.gr/en/blog/e-shop/top-10-benefits-online-shopping>

Case study

Tips for teacher

1 Online shopping experience

- **E-commerce platforms:** John uses several e-commerce websites and apps, such as Amazon, eBay, and local grocery delivery services.
- **Personalization:** these platforms use algorithms to analyze his shopping behavior, search history, and purchase history to offer personalized product recommendations.
- **Ease of access:** John can compare prices, read reviews, and make purchases with just a few clicks, saving him time and effort.

3 The privacy concerns

Despite the benefits, John becomes aware of several privacy issues:

- **Extensive data collection:** e-commerce platforms collect a vast amount of data, including browsing history, purchase history, search queries, and even location data.
- **Targeted ads:** John notices that ads for products he viewed or searched for on one platform appear on other websites and social media, indicating data sharing and tracking across multiple platforms.
- **Behavioral profiling:** companies create detailed profiles based on their online behavior, which can be used for targeted advertising but may also feel intrusive.
- **Data security:** there is a risk of data breaches, in which his personal information, including payment details, could be exposed.

5 Conclusion

John's case highlights the delicate balance between enjoying the convenience of personalized online shopping and safeguarding personal privacy. While the tailored shopping experience can be highly beneficial, users must be aware of the privacy implications and take proactive steps to protect their personal information. By being informed and cautious, users can enjoy the benefits of online shopping without compromising their privacy.

2 The convenience

The personalized shopping experience offers numerous benefits:

- **Relevant recommendations:** John receives product suggestions based on his preferences and past purchases, making it easier to find items he likes.
- **Exclusive deals:** he is notified about discounts and deals on products he's interested in, which helps him save money.
- **Time savings:** the convenience of having tailored suggestions reduces the time he spends searching for items.
- **Enhanced experience:** the customized shopping experience feels more engaging and user-friendly.

4 Balancing privacy and convenience

John decided to take steps to protect his privacy while still enjoying the convenience of online shopping:

- **Review privacy settings:** he carefully reviewed and adjusted the privacy settings on his e-commerce accounts to limit data collection and sharing.
- **Use privacy tools:** John started using privacy-focused tools such as ad blockers, tracker blockers, and private browsing modes to reduce online tracking.
- **Opt-out options:** he utilized options for personalized ads and marketing communications wherever possible.
- **Diversify shopping platforms:** John diversified his shopping across multiple platforms to avoid creating a comprehensive profile on any single platform.
- **Data minimization:** he provided only necessary information and avoided saving payment details on e-commerce sites to minimize data exposure.

Case study

Instructor's guide for teaching case study

Objective

This session aims to help students understand the fundamentals of privacy and convenience, especially in daily life activities such as smart home devices, mobile apps, and online shopping. It will involve interactive discussions, reflections, and activities to reinforce the learning.

General tips for teachers

- **Engage students:** keep the session interactive and encourage participation.
- **Relate to real life:** use real-life examples and scenarios students can relate to.
- **Be adaptive:** adjust the session based on students' responses and engagement levels.
- **Encourage critical thinking:** prompt students to think critically about the trade-offs between privacy and convenience.
- **Stay updated:** keep yourself informed about the latest trends and issues in privacy and technology (latest incident)

Case study

Instructor's guide for teaching case study

1

Preparation

- Materials needed:
 - Presentation slides with the case study
 - Handouts of case study scenarios
 - Google Forms link with activity/assessment questions
- Setup:
 - Arrange seating to facilitate group discussions.
 - Share the Google Forms link with the students before/during the session starts.

2

Session Outline

- Explain the session's objective: to explore how technology impacts our privacy and how we can balance convenience with privacy protection.
- Icebreaker: ask students to share one piece of technology they use daily and how it makes their lives easier.
- Present the Case Study and discuss the convenience and the privacy issues faced.
- Explain John's experience with personalized shopping and targeted ads, and the privacy concerns it raised.
- Split students into small groups of 3-4 and ask each group to identify the main privacy concerns in the assigned case study.
 - Have them discuss potential solutions or actions to mitigate these privacy risks.
 - Encourage them to think about the balance between convenience and privacy.
- Share the Google Forms link with the students.
 - Have students complete the questions individually or in pairs.
 - Questions will include fill in the blank, multiple choice, multiple correct answers, and self-reflection prompts.
- Scenario-based discussions:
 - Present short scenarios and ask students to reflect on what they would do.
 - Examples: "What steps would you take if you found out your smart device was listening to private conversations?" or "How would you handle a data breach notification from a fitness app you use?"

Case study

Instructor's guide for teaching case study

3

Reflection and Conclusion

- **Self-reflection**

- Ask students to write a short paragraph on how they can balance privacy and convenience in their daily lives.

- **Key takeaways**

- Summarize the main points discussed during the session.
- Emphasize the importance of protecting privacy while enjoying technological conveniences.

THANK YOU

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