

PR2.A – TEACHING SOURCES

Title	What's an algorithm?
Duration	1 session
Age Group	14 – 16 YO
Dimension of the advised group of students	<i>One group of 20-30 people divided in small groups</i>
Area	<input type="checkbox"/> Area 1: Reading, writing and literature <input checked="" type="checkbox"/> Area 2: Math <input type="checkbox"/> Area 3: Second language learning <input type="checkbox"/> Area 4: Sciences <input type="checkbox"/> Area 5: Soft skills
Specific objectives	<ul style="list-style-type: none"> - <i>To understand how math is integrated in our lives</i> - <i>To learn how and why internet platforms collect and use personal data</i> - <i>To understand the commercial value of data</i> - <i>To learn strategies to control the collection of data and the impact of algorithms on online experience</i> - <i>To reflect on the impact of data collection and algorithms in our lives and on society and what governments and/or corporations should do to change things</i>
Needed Materials	<ul style="list-style-type: none"> - <i>Video</i> - <i>Slideshow</i> - <i>Photocopies</i> <p>If the training is organized online one communication platform will be necessary.</p>
Software	<ul style="list-style-type: none"> - <i>One online communication platform, such us: Zoom, Google Meet, Webex, etc.</i> - <i>In person, no software is needed.</i>
Description	<p><i>An algorithm is a method of solving problems both big and small. Though computers run algorithms constantly, humans can also solve problems with algorithms. Algorithms are the basis of social media, but data collection for better usage experiences has become a contentious point.</i></p> <p><i>Social media users' concerns about their privacy have spiked in recent years. Incidents of data breaches have alarmed many users and forced them to rethink their relationships to social media and the security of their personal information. The dramatic story of the consulting agency Cambridge Analytica is a case in point. The firm exploited the private information of over 50 million Facebook users to influence the 2016 American presidential election. This example and others have steadily deteriorated public trust and resulted in many users wondering if they have lost control over their own data.</i></p> <p><i>These growing privacy concerns have prompted advocacy for tighter regulations. In addition, they have placed companies responsible for safeguarding personal data under</i></p>

	<p>greater scrutiny. Given today's social media privacy issues and concerns, skilled cybersecurity professionals will play a vital role in protecting social media users' data and personal information. The activities contained here aim to make youngsters aware of their online presence and its dangers.</p>
<p>Procedure on how to put in practice</p>	<p>Duration: 60 minutes No of participants: small groups Methods used: group discussion, collaborative work Competences developed: critical thinking, logical thinking</p> <p>Step-by-step description:</p> <ol style="list-style-type: none"> 1. Watch TED-Ed video about how algorithms and complete comprehension questions in pairs. 2. Discuss in groups: What's something that you did today that could be described in the form of an algorithm? In real life, why do you think people tend to count by 1s and 2s but not by 3s? 3. Ask participants how many of them have accounts on social media. Then ask them if they know how social networks like Instagram, Snapchat, etc., make money. 4. Show them a fictional Instagram profile and ask participants to draw conclusions about that person based on their profile. 5. Then show them what the profile looks like to the company that owns the social media platform and ask them to answer the same questions. 6. Tell participants that they're going to try to look at their own online presence. Distribute the assignment sheet Mapping Your Data Profile and have them create a mind map with one of their social network accounts in the middle. Ask them to add at least five "branches" representing different kinds of data the platform knows about them. Next, have them draw a third layer that represents broader conclusions about them (ethnicity, interests, etc.) connected to one or more of the kinds of data. Partner them with someone else and ask them to try to identify what the platform might know about them based on liking their two profiles together. 7. In groups, discuss how you feel about how much platforms know about them. <p>Debriefing question: What do they think platforms or governments should do to limit the harm done by data collection and algorithms?</p>
<p>Link</p>	<p>http://www.equalityproject.ca/wp-content/uploads/2019/07/Lesson_Invisible_Machine.pdf https://ed.ted.com/lessons/your-brain-can-solve-algorithms-david-j-malan?lesson_collection=math-in-real-life</p>
<p>Download</p>	<p>Please upload the PDF file of the Teaching Source if it is not available online</p>
<p>External documents</p>	<p>Please upload the PDF file(s) of any other resource as annex of the Teaching Source</p>