Website Development: Educating Students on the Risks and Value of Personal Data

Biespel Rebo M. Pestañas
Emmanuel Resurreccion Congressional Integrated High School
STEM 12-3
brmpestanas@ercihs.edu.ph

Alluind R. Dela Cruz
Emmanuel Resurreccion Congressional Integrated High School
STEM 12-3
ardelacruz@ercihs.edu.ph

John Arht A. Vivar
Emmanuel Resurreccion Congressional Integrated High School
STEM 12-3
jaavivar@ercihs.edu.ph

Abstract

Despite the importance of personal data's risks and value, there is still a lack of educational resources and tools tailored for students. Furthermore, there are no online tools to easily calculate an individual's level of risk for personal data breach. This project has aimed to fill this gap by developing a website. The nature of this project is a quantitative descriptive study that presents the development of a website and the response and evaluation by visitors. The website was developed from scratch with Visual Studio (VS) code and javascript. as well as collaborated on Github. The content of the website was curated based on timely studies on personal data and also included links to research papers. The researchers also created a tool that computes the possibility of personal data breaches and significance of personal data types, the product and sum being the level of risk an individual had. It was then hosted on the Emmanuel Resurreccion Congressional Integrated High School's domain. As for the evaluation of the website, the study conducted a survey on students in grade 9, grade 10, and grade 12. Of the 2000 students in these grade levels, 205 visited the website and agreed to participate in the survey. The survey yielded positive results, with medians of positive and very positive. The sample size is representative of the population at a 95% confidence level and a margin of error of 6%. As for the final product, the project had developed a website, dataed.ercihs.com, that had the functions of calculating risk level and presenting knowledge and information on personal data. The website was evaluated on four criteria, Content, Aesthetics, Effectiveness, and Shareability. The evaluation of the website was overall positive from the students in ERCIHS, however, recommendations and suggestions will be considered for further development of the site.

Keywords: Personal Data, Website Development, Personal Data Risk Assessment

INTRODUCTION

Students in this day and age are exposed more than ever. They are exposed to all kinds of information, opinions, news, and entertainment because of technological advancements - mainly the internet and social media. In turn, their lives can also be exposed to the public. Through sharing personal data or allowing cookies to track their online activity, students can potentially be a victim of identity theft, phishing attacks, data breaches, and other cybercrimes, exploitation, and privacy breaches.

In the digital age, personal data has become a valuable commodity that fuels communication and innovation. The sharing of information has grown immensely in the 21st century. According to a study on Statista.com (2024), it is estimated that 402.74 million terabytes of data are created each day. Data containing every movement, every thought, and every human being's life. As a result, this data carries unfathomable value if utilized wisely. An example is how Tik Tok's algorithm uses data algorithms to keep users engaged, helping it rise in popularity and compete for market share in the social media industry. From government monitoring for national security, to statistical treatment for academic research, to predicting trends in business ventures, all of this data has the power to change the world. On the other hand, cybersecurity threats, data breaches, and privacy violations have become common concerns as personal data is increasingly commodified - Issues regarding exploitation of data by conglomerates and unwarranted government surveillance. Additionally, many individuals are unaware that their data can be exploited without their consent through cookies or nefarious terms and conditions agreements. For students, especially those in senior high school, the internet serves as a platform for social interaction, education, and entertainment. However, the extent of personal information they share online may expose them to risks they are not fully aware of. This information can range from seemingly harmless data such as their name and age, to more sensitive information like location and even personal preferences. The consequences of data exposure may lead to privacy invasions, identity theft, or exploitation by data brokers and malicious entities.

Cybersecurity is critical in protecting people who use the internet through various electronic devices in their daily lives (Sharma, 2023). Hackers and Data Brokers have posed a significant threat in unauthorized access data exploitation to personal data such as Names, Home Address, IP Address, and Phone Numbers. They must, however, be protected when using the internet and secure against unauthorized access and cyber security plays a critical role in securing such data. Crimes involving personal data are crimes or illegal activities that use the internet, network, computer and digital devices. Examples of cybercrimes and activities involving personal data are fraud, the trafficking of child pornography, identity theft, and privacy violations. With the ever expanding digital space, a rise in data has been correlated with a rise in incidents of data theft (Vaidya, 2023). According to Federal Law, the term personal data refers to any information relating directly or indirectly to a certain or definable person (subject of personal data). Due to this broad understanding of personal data, questions arise concerning the attribution of particular information about an individual to personal data (Soldatova, V. 2020). Personal data sharing of students is becoming more common and normal among students. In return, they get personalized services, learning experiences, and tailored media content with the aim to get enhanced engagement (Buggenhout et al. 2023).

Despite the importance of being literate on the risk and value of personal data, there is a lack of online resources that can directly teach students about personal data risks and value, and give an assessment on their vulnerability to personal data breaches. This is the purpose of this project. This project aims to develop a website that can inform students about personal data, and more importantly, develop a built in survey to calculate the

visitor's level of personal data risk. In developing this website, this study aims to present a useful resource for students.

This project will aspire to shed more light on personal data's risks and value, as well as educate students on the risks and value of personal data. Additionally, it will develop a way to calculate personal data risk levels for the safety of the viewer. This is through the creation of an educational website that can provide them the necessary knowledge to navigate the internet. Since this website is tailored to students, the development of this website will be more effective in teaching them than traditional methods. With the creation of this website, it will benefit students in their present and future use of technology, creating a safer and more productive online environment. Hence, without this project, students will be deprived of another potential resource in their journey in the modern age.

Scientific Basis and Theoretical Framework

In this project, the researchers are aiming to develop a website that aims to impart information on personal data's risks and value. As well as give an assessment on their susceptibility to personal data risks.

The project is built upon the fact that the sharing of personal data has risks and value for individuals. A part of an individual's activity online is sharing personal data. This is done consciously through inputting information on account creation or posting on accounts that is related to your identity. It can also be done unconsciously through the tracking of your activity on the internet by algorithms and cookies. And so, because of the vast amount of data, there will be entities who will consider them valuable. On the other hand, individuals will also find that there are risks in sharing personal data.

Hence, this study will increase public knowledge regarding personal data through the creation of a website. It will discuss personal data types, risks, value, and related industries. Information analyzed and sourced from trustworthy sources and dictionaries.

However, what is personal data? Personal data is any information that is related to an identified or identifiable living individual as defined by the European Commission (2024). Additionally, they have stated many types of personal data, which include: Names, Home Address, IP Address, Phone Numbers, and Medical Information. Furthermore, any information you share that can be traced back to your identity, even if under a pseudonym, is considered personal data. Only when that information cannot be identified to a person and is under anonymity can data not be considered personal. The importance of data in the 21st century can be overlooked. The Data Brokering Industry or Data brokers collect and gather many types of personal data to sell to third parties often without the individuals' consent. Data broker companies like Acxiom and Equifax have collected a large database full of personal data and the industry as a whole is estimated to be worth USD 471.25 Billion by 2032 (Beauvisage et al. 2020). Governments worldwide have increasingly sought access to personal data for various administrative, regulatory, and security purposes (F. Cate et al. 2012). With the expansion of digital space, the government has taken more importance on individuals' activities and personal data to improve and develop a better administration and security capabilities. Personal data is essential in academic research as well, particularly in fields like biomedical research, where data from millions worldwide is analyzed to improve health outcomes. The digitalization of health data, aided by social media and devices like smartwatches, has increased the scope of research but also intensified concerns about privacy and secondary data use (Parimi et al. 2023).

Personal data has various categories or types. Personal data according to Privacy laws in the United States are information that can be used to distinguish or trace an individual's

identity, such as name, date and place of birth, mother's maiden name, or biometric records and any other information that is linked or linkable to an individual.

• Name, such as full name, maiden name, mother's maiden name, or alias.
• Address information, such as street address or e-mail address.
• Telephone numbers, including business, and personal numbers.
• Personal characteristics, including photographic image (especially of face or other identifying characteristic) or fingerprints
• IP Address
• Social Media Accounts social media platforms students are active on (e.g., Facebook, Instagram, X).

Milne (2017) created a typology of information types based on perceived associated risks. Information was analyzed with four perceived risks, physical, psychological, monetary, and social. It also included the respondents sensitivity or reluctance on sharing these informations and their willingness to provide it.

(1) monetary risk is the risk associated with potential financial loss,
(2) social risk is the risk associated with threats to an individual's self-esteem, reputation, and/or the perceptions of others,
(3) physical risk is the risk associated with bodily injury, and
(4) psychological risk is the risk associated with potential negative emotions such as anxiety, distress, and/or conflicts with self-image

	Probability of Personal Data Breaches				
Significance of the Personal Data		1	2	3	4	5
	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

Table 1.1 (Personal Data Risk Assessment)

In this table, the level of risk is calculated based on two parameters: The Significance of the data and the Vulnerability to a breach in personal data.

Vulnerability refers to the individual's personal data exposure, i.e. the amount of data the individual has shared to the public, to websites, or to cookies.

Significance is based on the type of personal data. Wherein, address is a more significant type of personal data than first name.

The values of these two variables are multiplied to determine a score where a higher value has higher risk to damages

Statement of the Problem

Through researching for information on personal data's risk and value, the researchers have discovered a gap and lack of student tailored resources to educate themselves on personal data. Furthermore, a way to quickly calculate an individual's vulnerability to personal data breaches was not available. That is why this project's goal is to develop a website to supplement this.
For this project, the following questions will be asked so as to evaluate the created website:

- What is the website developed in this project?

- What is the evaluation of the website - in terms of content, aesthetics, effectiveness, and shareability - by students in Emmanuel Resurreccion Congressional Integrated High School?

METHODOLOGY

The following section encompasses the methodology of the study, and will be presenting the descriptive research design and conceptual model that will be the guide for the investigation. Additionally, operational definitions of terms will be specified so as to identify the variables and parameters. Since the project is a descriptive quantitative research, an IPOE format will be employed; The paper will state the detailed Input method, Process, Output, and Evaluation. And lastly, it will give the method for data collection. This section aims to establish this research as robust and replicable so as to convey the scientific integrity of the paper.

Research Design

Descriptive research design, as defined by John W. Creswell (2022), is a study that focuses on describing the characteristics of a population or phenomenon being studied. It is primarily used to gain an understanding of a particular group, situation, or case and employs methodologies such as observation, surveys, interviews, and experiments to collect data. This type of research answers fundamental questions like "Who, What, When, Where, Why, and How" related to the phenomenon under investigation. A format for Descriptive quantitative research is IPOE. The IPOE format—standing for Introduction, Purpose, Overview, and Evaluation—is a structured approach used in descriptive research design to provide clarity and organization to the research process. This paper will explore the development of a website and explain its content.

Conceptual Model

Website Development
Web development has been taught for decades. The world wide web was developed by Tim Berners-Lee in 1989 and has since evolved. For this project, the researchers will develop a website through programming languages such as Hyper Text MarkUp Language (HTML) and Javascript. For this particular project, the researchers will use:

HTML : For creating the layout and structure of the website.
CSS : In designing the aesthetic and style of the website.
JavaScript : To add the risk assessment calculation logic and moving parts of the website.
Live Server : For ensuring that the functions are running correctly.
Coding Software: VS (Visual Studio) Code for coding and testing

All of these come together to form a website.

Risk Assessment Calculation

	Probability of Exposure/Personal Data Breaches					
Significance of the type of Personal Data		1	2	3	4	5
	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

Table 1.1 (Personal Data Risk Assessment)

As for the risk level calculation, the models used by Scarfone (2022) and Donn (2025) were used as a basis. These were modified to be tailored to students' personal data preferences and presented as a built-in form in the website.

The model assesses the level of risk an individual has in terms of the significance of the type of personal data and the probability of exposure/personal data breaches.

The product of the two parameters will determine the risk level of the individual.

The types of personal data calculated are: Name, Email Address, Location, Telephone/Phone Number, Photos, IP Address, Bank Account, Microphone, Signature, and Biometric Data.

With each type of data exposed, the probability of personal data breaches increases. And, the significance of each type of data is based on research on the importance of types of data. Once the data is calculated, a score will be presented to the individual determining whether they are of high, medium, or low risk to personal data risks and exploitation.

Content
The content is curated by the researchers. Sourced from reputable references, Information on personal data risks and value is presented and tailor made for the education of students.

Website Functions and Content
Personal Data Risk Assessment Personal Data Risks Personal Data Value This Research Paper References

Project Design

This Project is a descriptive project following the IPOE model. Where input contains the necessary resources and tools for the creation of the project. Process refers to the procedure and development of the project. Output is the final result which will be disseminated. After the sharing of the results to the target demographic, surveys for the evaluation of the website will be conducted.

Input	Process	Output	Evaluation
Data Risk and Value Assessment Windows Computer Coding Language: HTML : Creating the structure (forms, buttons, result sections) CSS : Applying colors, fonts, and responsive design JavaScript : Adding risk calculation logic Live Server : Ensuring everything functions correctly Coding Software: VS Code for coding and testing	Determine the necessary features (risk calculation, recommendations, UI design). Gather research data on personal data risks and user behavior. Frontend Development (User Interface) - Create the structure using HTML - Style the website using CSS JavaScript for: Backend Logic (Functionality & Risk Calculation) Testing & Debugging Host the Website Online	Website Name : DataEd.ercihs.com Fully functional website for analyzing personal data risks Dynamic risk assessment based on user input Recommendations displayed based on data sensitivity	Surveys to measure students' understanding of risks and data protection practices. Feedback from the technical advisor and students on the applicability and clarity of the recommendations. Pre- and post-study comparison of cybersecurity awareness levels.

Project Making Procedure

Input:
Online resources for web development are naturally procured online. The download of software such as Notepad++ for HTML, CSS, and Javascript. Other resources are VS code for testing the website. On the other hand, the hardware includes a personal computer.

Process:
The development of the website will be done by the researchers over the course of a month. Wherein, code will be shared on GITHub and through messaging. The first step is planning. This is the designing of the layout of the website and its functions. Illustrating of the webpage and designing a criteria for the risk assessment function is done here. The next step is the actual coding of the website. This will be done through HTML with elements of Javascript and CSS - The code can be seen in appendix D. The researchers will code the website from scratch using Notepad++ without the use of web development template software. After the website is developed, it will be sent to the technical adviser for review and critiquing. After several rounds of taking feedback from the technical advisor and changing the website, it will then be published online.

Output:
The output will be **DataED.ercihs.com**. This website will have the functions of a risk assessment calculator for personal data as well as information regarding its risks and value. The research paper will also be available to view on this website.

Evaluation:
Apart from evaluation by the technical advisor, a sample of 15 random students that have visited the website will be invited to partake in a survey. This survey will evaluate the content, effectiveness, aesthetics, and shareability of the website. This evaluation will determine the success of the study's goal of creating a resource for students to be more informed on personal data.

Data Gathering Instrument

The data gathering instrument used in this study is a survey for evaluating the final output. This will be done both in person and through electronic means.

As the output is a website, the survey participants will be students that have visited the website. The sample will be 15 students randomly selected from visitors of the website. The survey will be a descriptive quantitative survey using the Likert scale to rate the website's: Content, Effectiveness, Aesthetics, and Shareability.

A consent form will also be included in the survey to protect the privacy and rights of the participants.

This survey is to be checked and validated by the technical advisor, so that the content of the survey is up to par with academic standards and is a robust way to determine the final output. This survey is seen in appendix B.

For a survey to be valid and reliable, there are various criteria to follow. Creswell (2022) states that at least 30 people should be surveyed for a valid quantitative characterization of the population. This project is set to be evaluated by grade 9, grade 10, and grade 12 students in Emmanuel Resurreccion Congressional Integrated High School, which has a population of 1571. To get an accurate prediction on the reception of the website for the population, with a confidence level of 95% and a margin of error between ±5% to ±8%, a sample size of 138 to 309 people must be surveyed (Singh, 2014)

The goal for the amount of participants will be at least 180 people who have visited the website. The participants will be all the consenting students who have viewed and tested the website.

Statistical Tool

The assessment of the data will be a simple descriptive statistical analysis of the medians. The four categories in the evaluation survey are: Content, Effectiveness, Aesthetics, and Shareability. These four categories will be scored on a Likert scale. The median of the scores will be taken and coded. The descriptive analysis will then be interpreted by the researchers so as to determine the success of the project.

RESULTS AND DISCUSSION

Results

The final output of this project is a website: DataED.com. Its functions include a risk assessment calculator and information on personal data. The website also included recommendations to the visitor depending on their risk value calculated. Another function of the website is the viewing of this research paper. The design is simple and it consists of only one page. Scrolling down, the calculations for the risk assessment calculator will be seen first. Followed by the actual risk calculator. Once the calculation is done, further down the page are the results. The assessment will state whether the visitor had high, moderate, or low risk and will give a recommendation accordingly. This is also the educational portion of the website. At the bottom of the page lay the references and the information of the authors. Additionally, on the top right of the screen can be seen the button to view this research paper document.

As for the public evaluation, they yielded the following data:

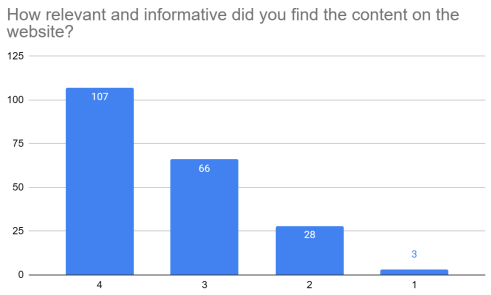


Table 2.1 (Relevance of the Content)

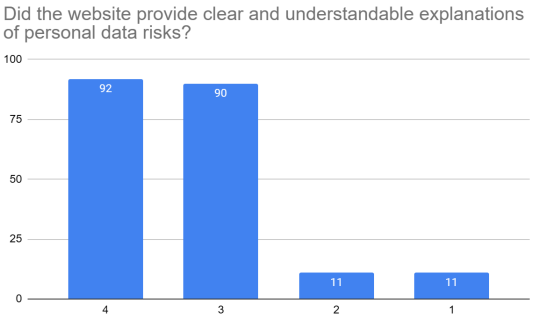


Table 2,2 (Clarity of the Content)

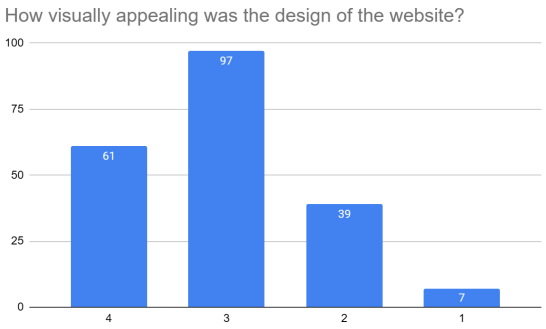


Table 2.3 (Visual Appeal)

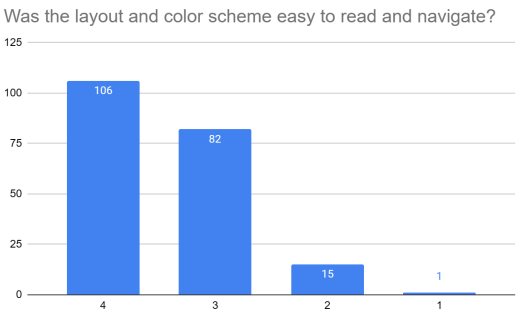
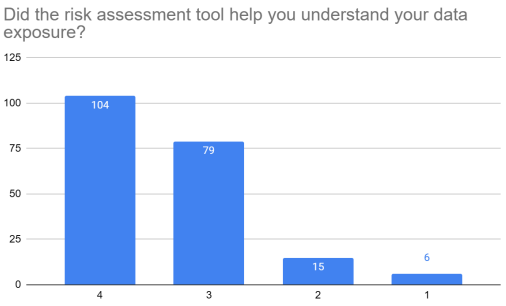


Table 2.4 (Layout and Color Scheme)



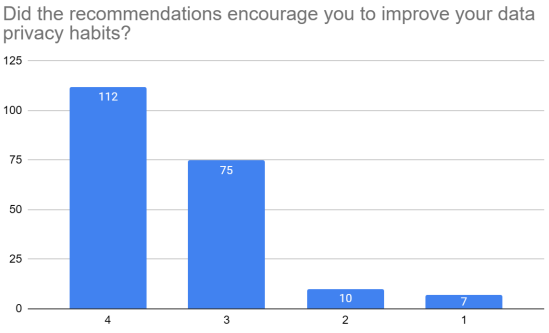


Table 2.5 (Effectiveness of the Recommendations) Table 2.6 (Risk Calculation Effectiveness)

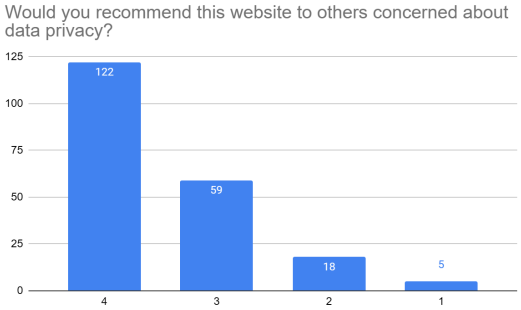


Table 2.7 (Shareability)

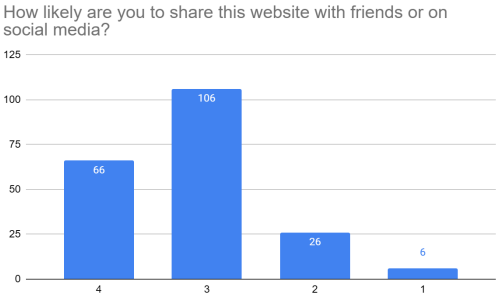


Table 2.8 (Shareability)

If you have any suggestions or recommendations, feel free to add ;
-"Difference in choice of color in background to appear more appealing to various students and individuals." -"I wish there was a bit more info on what the website is about." -"More variety of info / data types" -"Condense the text and change the wall of text to make it less crowded" -"Bland cover page" -"Shorten the Texts" -"Increase the font size"

Table 2.9 (Suggestions)

Criteria	**Question**	**Median** **Likert Scale** **1- Very Bad** **2- Bad** **3- Good** **4- Very Good**	**Standard Deviation**
Content	**1**	**4**	**0.6580053301**
	2	**3**	**0.7790276362**
Aesthetics	**3**	**3**	**0.7210600088**
	4	**4**	**0.7210600088**
Effectiveness	**5**	**4**	**0.6902530517**
	6	**4**	**0.7613869876**
Shareability	**7**	**4**	**0.7223151185**
	8	**3**	**0.8586727203**

205 students were surveyed for this evaluation. Compared to the population of the demographic being assessed - students of grade 9, 495; grade 10, 572; and grade 12, 504 - which was 1571 students, the evaluation will have a 95% confidence level at a 6% margin of

error. Thus, the researchers are confident that the responses will be able to reflect the population's reception of the website..

The results have shown that most of the students view the website positively, with the median being in the positive range for all categories.

For Content, the median is 4 and 3, indicating a positive response to the information on the site. The standard deviation is low, meaning most responses deem the content educational and relevant.

For Aesthetics, the median is 3 and 4, indicating a positive response to the style and design of the website. The standard deviation is low, meaning most responses deem the aesthetics, well placed and readable.

For Effectiveness, the median is 4 and 4, indicating a very positive response to the functions of the website. The standard deviation is low, meaning most responses deem the effectiveness of the personal data risk level assessment and its recommendations helpful and useful.

And lastly, for Shareability, the median is 3 and 4, indicating a positive response to promoting and spreading the website. The standard deviation is low, meaning most responses deem the shareability of the website to be probable and a beneficial act.

There were also suggestions on the improvement of the site. To summarize, changes can be made to the presentation of recommendations and additions can be made to keep retention. Blocks of text are not recommended when presenting data to any individual and so the addition of images, videos, or other multimodal way of sharing knowledge is preferable.

Conclusion

With the completion of the project, the researchers had to assess their results and to determine if their goal to create a website was successful. The final output was a website that contained various information and knowledge regarding personal data, and a personal data risk calculator. This website has completed the goal of creating a resource that can facilitate learning and increase awareness on personal data's risks and value. Additionally, it has given students a way to assess their personal data risk level, in turn, developing a tool to facilitate education on personal data..

Subsequently, the website was also evaluated by professionals and students. The overall sentiment was that the website was generally well-received, with most users finding it informative and useful. In terms of content, the majority of respondents rated it as relevant and clear. Delivering appropriate knowledge on personal data and its risks. As for Effectiveness, users found the risk assessment tool helpful in understanding data exposure, and the recommendations encouraged them to improve their privacy habits. The aesthetics were rated mostly suitable, but there could be changes made to presentation of information. And finally, shareability was also rated positively, especially with sharing on social media. All of these results were encouraging and indicate that the website successfully fulfills its purpose, however, there were also suggestions for further development. These suggestions include; Adding more introductory information to clearly explain what the website does; Enhancing the color scheme to improve visual appeal; Refining the layout and text presentation for better readability. These suggestions will be taken into account in any future improvements made to this website.

Recommendations

This website is the first step to creating more resources for students online. Resources that can facilitate learning, provide a tool, or be beneficial to a student in any way. Thus, it is the recommendation of this paper that others also develop for themselves a website, app, or any other similar material. So as to create an online culture conducive to learning.

And as for the website developed in this project, it is advised to follow the suggestions made by the evaluators. The website can definitely be improved and added upon. Such as; Adding more introductory information to clearly explain what the website does; Enhancing the color scheme to improve visual appeal; Refining the layout and text presentation for better readability. Additionally, other functions can be implemented to expand the utility of the website. It is also advised that future researchers conduct the survey again to validate the results of the study.

References

Beauvisage, T., et al. (2020). The data brokering industry: Market, players, and ethics. *Journal of Business Ethics, 165*(2), 225-240. https://www.researchgate.net/publication/270126631_Market_Research_and_the_Ethics_of_Big_Data

Buggenhout, J., et al. (2023). Student data sharing: Benefits, risks, and educational applications. *Education & Digital Security Journal, 18*(1), 45-67.

https://www.researchgate.net/publication/350800051_Private_and_Secure_Students'_Data_Sharing_in_Educational_Systems

Cate, F. H., et al. (2012). Government access to personal data: Surveillance and privacy concerns. *International Data Protection Review, 7*(3), 112-130.

https://www.sciencedirect.com/science/article/pii/S0740624X22000120

Creswell, J. W. (2022). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.

https://spada.uns.ac.id/pluginfile.php/510378/mod_resource/content/1/creswell.pdf

European Commission. (2024). *What is personal data?* Retrieved from https://commission.europa.eu/law/law-topic/data-protection/data-protection-explained_en

Milne, G. R. (2017). Information sensitivity typology: Mapping the risks of data disclosure. *Journal of Consumer Policy, 40*(1), 25-50.

https://www.researchgate.net/publication/304033920_Information_Sensitivity_Typology_Mapping_the_Degree_and_Type_of_Risk_Consumers_Perceive_in_Personal_Data_Sharing

Parimi, K., et al. (2023). Digital health data and privacy: Risks and ethical considerations. *Biomedical Informatics Review, 31*(4), 278-295.

https://pubmed.ncbi.nlm.nih.gov/39151529/

Sharma, R. (2023). Cybersecurity in the age of data breaches: Protecting personal information. *Journal of Information Security, 21*(2), 88-104.

https://www.sciencedirect.com/science/article/pii/S0268401223001007

Singh, K. (2014). *Research methodology and sample size determination in social sciences.* Pearson Education.

https://www.researchgate.net/publication/341552596_Sampling_Techniques_and_Determination_of_Sample_Size_in_Applied_Statistics_Research_An_Overview

Soldatova, V. (2020). Legal perspectives on personal data attribution. *Privacy Law Journal, 15*(4), 102-121.

https://id4d.worldbank.org/guide/data-protection-and-privacy-laws

Statista. (2024). Daily data generation and trends in big data. Retrieved from https://www.statista.com

Vaidya, S. (2023). Data theft and the growing digital space: Correlations and preventive measures. *Cyber Law & Ethics, 12*(3), 210-233.

https://www.researchgate.net/publication/375115830_CYBERSECURITY_IN_THE_DIGITAL_SPACE

Scarfone, K. (2022). A framework for personal data risk assessment: Best practices and methodologies. *Cybersecurity Risk Journal, 28*(2), 112-139.

https://www.researchgate.net/publication/377015734_Risk_Analysis_and_Assessment_Framework_for_Cyber_Security_in_Management_SystemsRisk_Analysis_and_Assessment_Framework_for_Cyber_Security_in_Management_Systems

Donn, R. (2025). Risk assessment models in cybersecurity: A predictive approach. *Journal of Cybersecurity Studies, 30*(1), 55-74.

https://www.sciencedirect.com/science/article/pii/S2772662223001686

About the Author(s)

Pestañas, Biespel Rebo M. *(brmpestanas@ercihs.edu.ph)* Graduating student in Emmanuel Resurreccion Congressional Integrated High School, with research interests in Technology and its uses. Other research interests include; business, social structures, natural sciences like physics, chemistry, and biology, the brain. and time.

Dela Cruz, Alluind R. *(ardelacruz@ercihs.edu.ph)* A student at Emmanuel Resurreccion Congressional Integrated High School, with a strong interest in cybersecurity, data privacy, and risk assessment. Passionate in web development, data protection and emerging technologies in digital communication.

Vivar, John Arht A. *(jaavivar@ercihs.edu.ph)* their affiliation and research interests. A student in Emmanuel Resurreccion Congressional Integrated High School, with interest in Music Technology and Food Science and Technology.

Appendices

Appendix A - ACKNOWLEDGEMENT

We are deeply thankful to our research adviser Mr. Nikko Angelo Quilo, our Information Technology Specialist, for his technical support;

To Mrs. Adelma S. Topacio, our teacher in Practical Research 2, 3Is, and Capstone for her invaluable guidance on our graduating year in Emmanuel Resurreccion Congressional Integrated High School;

To the Teachers and Classrooms who participated in this paper through the evaluation surveys.

To Emmanuel Resurreccion Congressional Integrated High School for facilitating the education and supporting its students in developing not only research skills, but also life skills.

And to our fellow researchers, especially to our classmates STEM 12-3, whose assistance and cooperation have been crucial in this endeavor.

We would like to express our sincerest appreciation to our families, friends, and loved ones, who have been a constant source of inspiration, strength, and joy.

Lastly, We would like to express our deepest gratitude to God, whose constant presence and unwavering guidance have led us along the way. His love has been our main source of strength throughout this research journey.

Appendix B - EVALUATION SURVEY

Website Evaluation - DataED

Thank you for taking the time to evaluate our website. Your feedback is essential in improving its usability, effectiveness, and overall experience. This form will assess the content, aesthetics, effectiveness, and shareability of the website. Your responses will help us refine the tool and enhance its impact on digital privacy awareness.

By submitting this form, you consent to the collection of your responses for research and improvement purposes. Your personal information will not be shared, sold, or used for any purpose other than website validation. All responses will remain confidential and stored securely. You have the right to request the removal of your data at any time by contacting our team.

WEBSITE: Dataed.ercihs.com

Before proceeding with the validation form, please visit and explore our website using the link. Navigate through the features, try the personal data risk assessment tool, and review the recommendations provided. Once you've explored the website, return to this form to provide your feedback.

Personal Information

Name and Section *(Optional)*: _____

Content Evaluation

1. **How relevant and informative did you find the content on the website? *(Required)***
   ☐ 1 - Not at all informative ☐ 2 ☐ 3 ☐ 4 - Very informative
2. **Did the website provide clear and understandable explanations of personal data risks? *(Required)***
   ☐ 1 - Not clear at all ☐ 2 ☐ 3 ☐ 4 - Very clear

Aesthetics & Usability

3. **How visually appealing was the design of the website? *(Required)***
   ☐ 1 - Not appealing ☐ 2 ☐ 3 ☐ 4 ☐ 5 - Very appealing
4. **Was the layout and color scheme easy to read and navigate? *(Required)***
   ☐ 1 - Difficult to read/navigate ☐ 2 ☐ 3 ☐ 4 - Very easy

Effectiveness of Risk Assessment Tool

5. **Did the risk assessment tool help you understand your data exposure? *(Required)***
   ☐ 1 - Not at all helpful ☐ 2 ☐ 3 ☐ 4 - Very helpful
6. **Did the recommendations encourage you to improve your data privacy habits? *(Required)***
   ☐ 1 - Not at all ☐ 2 ☐ 3 ☐ 4 - Definitely

Shareability & Recommendations

7. **Would you recommend this website to others concerned about data privacy? *(Required)***
   ☐ 1 - Definitely not ☐ 2 ☐ 3 ☐ 4 - Definitely yes
8. **How likely are you to share this website with friends or on social media? *(Required)***
   ☐ 1 - Very unlikely ☐ 2 ☐ 3 ☐ 4 - Very likely
9. **If you have any suggestions or recommendations, feel free to add:**

   _____

Appendix C - LETTER FOR SURVEY

Subject: Request for Participation in a Survey on Personal Data Awareness

We, the undersigned students of STEM 12-3, are conducting a research study titled "Website Development: Educating Individuals on the Risks and Value of Personal Data." As part of this study, we have developed a website that provides insights into personal data risks and includes a built-in risk assessment tool.

In line with this, we are conducting a survey to evaluate the effectiveness of our website in terms of:
Content (Accuracy & Relevance)
Aesthetics (Design & User Experience)
Effectiveness (Usefulness of the Risk Calculator)
Shareability (Likelihood of Users Sharing the Website)

We kindly request your participation in this survey, as your feedback is essential in assessing the website's impact and identifying areas for improvement. The survey will take approximately 5-10 minutes to complete. All responses will remain confidential and used solely for research purposes.

If you agree to participate, please access the survey through the following link: https://forms.gle/FVqevCtmnUC2MxEo9

Appendix D - WEBSITE CODE

The website developed for this research can be accessed at:
Website Link : Dataed.ercihs.com

The full source code is available on GitHub:
GitHub Repository: github.com/KirigayaWin/dataed

Below is the core code used in the development of the website:

Index.html :

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Personal Data Risk Assessment</title>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <header>
        <h1>Personal Data Risk Assessment</h1>
    </header>
    <section id="assessment">
        <h2>Calculate Your Risk Level</h2>
        <form id="riskForm">
            <label for="dataType">What type of data do you usually share?</label>
            <div id="dataType">
                <input type="checkbox" id="basic" name="dataType" value="1">
                <label for="basic">Basic (Name, Age)</label><br>
                <input type="checkbox" id="moderate" name="dataType" value="2">
                <label for="moderate">Moderate (Email, Address)</label><br>
```

```
            <input type="checkbox" id="sensitive" name="dataType" value="3">
            <label for="sensitive">Sensitive (Bank Info, ID Number)</label>
        </div>
        <button type="button" onclick="calculateRisk()">Check Risk</button>
    </form>
    <p id="result"></p>
  </section>
  <script src="script.js"></script>
</body>
</html>
```

Style.css :

```
body {
  font-family: Arial, sans-serif;
  text-align: center;
  background-color: #f4f4f4;
  padding: 20px; }
header {
  background: #333;
  color: white;
  padding: 10px; }
section {
  background: white;
  padding: 20px;
  border-radius: 10px;
  box-shadow: 0px 0px 10px gray;
  width: 50%;
  margin: auto; }
```

Script.js :

```
function calculateRisk() {
  const checkboxes = document.querySelectorAll('#dataType input[type="checkbox"]');
  let riskLevel = 0;
  checkboxes.forEach((checkbox) => {
    if (checkbox.checked) {
      riskLevel += parseInt(checkbox.value); }  });
  let riskMessage = '';
  if (riskLevel <= 1) {
    riskMessage = 'Low Risk';
  } else if (riskLevel <= 3) {
    riskMessage = 'Moderate Risk';
  } else {
    riskMessage = 'High Risk'; }
  document.getElementById('result').innerText = `Your risk level is: ${riskMessage}`; }
```

Republic of the Philippines
Department of Education
Region IV-A CALABARZON
CITY SCHOOLS DIVISION OF DASMARIÑAS CITY
EMMANUEL RESURRECCION CONGRESSIONAL INTEGRATED HIGH SCHOOL
VIA VERDE VILLAGE, SAN AGUSTIN II, CITY OF DASMARIÑAS, CAVITE