

**EVALUATION OF CONTRAST RATIO ON
UNIVERSITAS PENDIDIKAN GANESHA
E-LEARNING WEBSITE FOR PARTIAL COLOR
BLINDNESS PEOPLE USING WEB CONTENT
ACCESSIBILITY GUIDELINES (WCAG) 2.1**



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JURUSAN TEKNIK INFORMATIKA
FAKULTAS TEKNIK DAN KEJURUAN
UNIVERSITAS PENDIDIKAN GANESHA
SINGARAJA**

2023



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**Diajukan kepada
Universitas Pendidikan Ganesha
Untuk Memenuhi Salah Satu Persyaratan dalam Menyelesaikan
Program Sarjana Sistem Informasi**

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SINGARAJA**

2023

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DAN MEMENUHI SYARAT-SYARAT UNTUK
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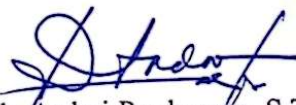
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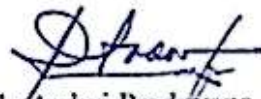
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STATEMENT

I hereby declare that the bachelor thesis entitled “Evaluation of Contrast Ratio on Universitas Pendidikan Ganesha E-Learning Website for Partial Color Blindness People Using Web Content Accessibility Guidelines (WCAG) 2.1” and all of its contents are completely my own work, and I do not copy and quote in ways that are not in accordance with the ethics that apply in the scientific community. For this statement, I am ready to bear the risks or sanctions imposed on me if later found a violation of scientific ethics in my thesis or there is a claim to the authenticity of my thesis.

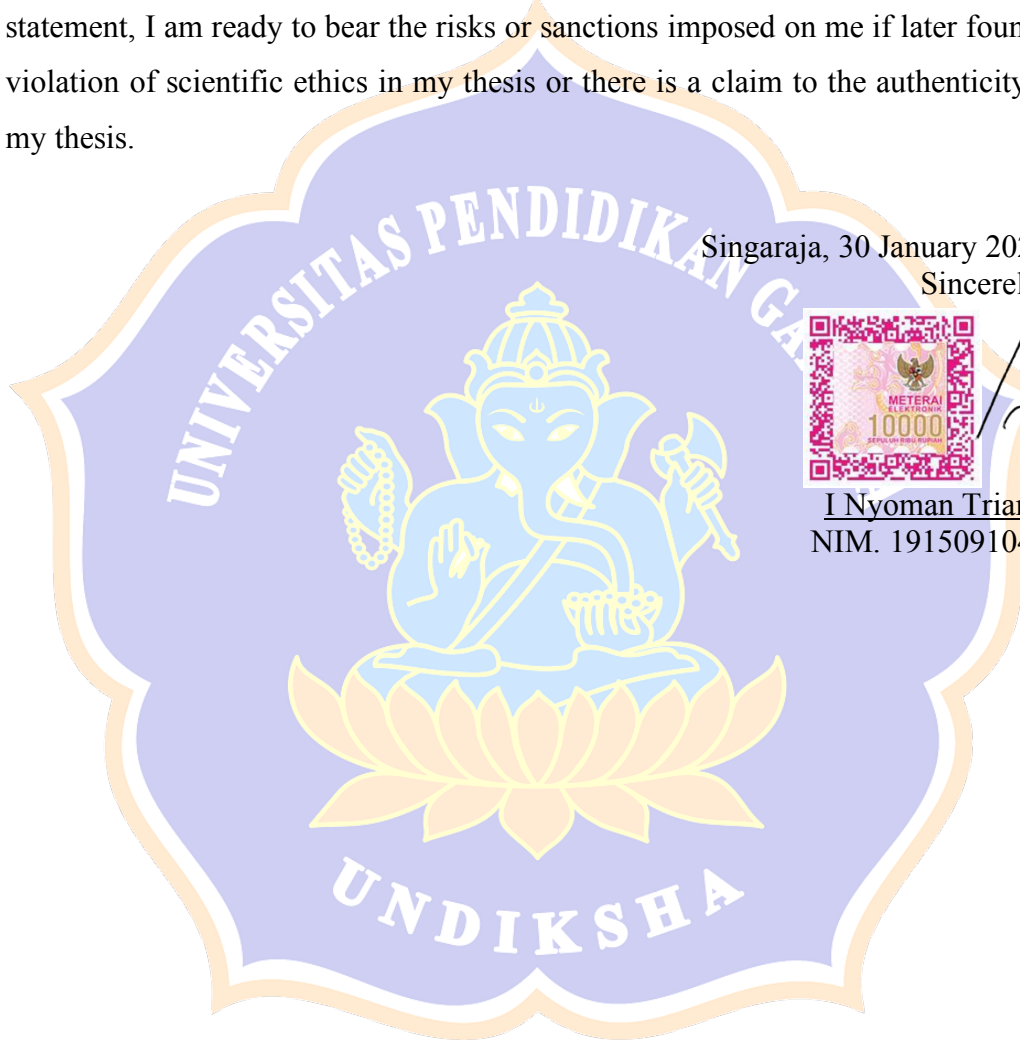
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Sincerely,



Handwritten signature of I Nyoman Triarta.

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MOTTO

“

Just because it's hard - doesn't mean it's impossible.

You can do it

”



FOREWORD

First of all, the researcher would like to express his greatest gratitude to the Almighty God, Ida Sang Hyang Widhi Wasa, for the endless blessing, so that this bachelor thesis entitled **“Evaluation of Contrast Ratio on Universitas Pendidikan Ganesha E-Learning Website for Partial Color Blindness People Using Web Content Accessibility Guidelines (WCAG) 2.1”** could be well-accomplished. This bachelor thesis is established as a requirement of accomplishing bachelor’s degree in information system study Program, Universitas Pendidikan Ganesha.

In this great occasion, the researcher also would like to say that this bachelor thesis would not finish without support and contribution from several parties. Therefore, the researcher would like to address his deepest gratitude and appreciation to:

1. Prof. Dr. I Gede Sudirtha, S.Pd., M.Pd as the Dean of the Faculty of Engineering and Vocational, Universitas Pendidikan Ganesha, who has allowed the researcher to write this bachelor's thesis.
2. Mr I Made Dendi Maysanjaya, S.Pd., M.Eng as the main supervisor of this research who has helped in many things, as the guidance and as the supervisor who shared much knowledge about research and contrast ratio evaluation.
3. Mr I Made Ardwi Pradnyana, S.T., M.T as the associate supervisor of this research who has provided a lot of knowledge in research writing and evaluation.
4. Dr. Miao-Hsien Chuang as a supervisory lecturer from Ming-Chi University of Technology who guided the researcher and gave much knowledge to the researcher.
5. All Lecturers in the Department of Informatics Engineering / Information System Study Program who have shared their knowledge and experiences during my lectures hope that everything the researcher learn in college can be helpful for the wider community.

6. My parents (Mr. I Made Karna and Mrs. Ni Ketut Muspa), and my whole family for the support, motivation, and prayer to accomplish this bachelor thesis.
7. Friends in the Information Systems Study Program class of 2019 who have given the researcher various experiences and togetherness while the researcher was studying at Universitas Pendidikan Ganesha.
8. All Fast Track students batch 2022 from Universitas Pendidikan Ganesha in Ming Chi University of Technology Taiwan and Official OIA 323 members that have encouraged and supported the researcher morally and materially during this research.
9. I cannot mention all parties who have helped that I cannot say one by one. I thank you very much.

The researcher is fully aware that what is presented in this bachelor thesis still needs to be improved due to the limitations of the researcher abilities. For this reason, for the sake of the perfection of this thesis, the researcher expects all constructive criticism and suggestions from various parties. The researcher hopes this bachelor thesis can be helpful and valuable for all of us, especially for developing the world of education.

Singaraja, 30 January 2023

Researcher

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FOR PARTIAL COLOR BLINDNESS PEOPLE USING
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ABSTRACT

This research aims to determine the results of evaluating the contrast ratio of the Universitas Pendidikan Ganesha e-learning website for people with partial color blindness using the Web Content Accessibility Guidelines (WCAG) 2.1, as well as knowing the results of the contrast ratio recommendation for the website based on the results of the contrast ratio evaluation conducted. This research uses one of the success criteria from WCAG 2.1 as a reference, namely the minimum contrast ratio level AA, where the minimum value of the contrast ratio between foreground and background is 4.5:1. To help the process of evaluating and recommending contrast ratios, two evaluation automation tools are used, namely the WCAG Color Contrast Checker to evaluate contrast ratios, and the Polypane Color Contrast Checker to design contrast ratio recommendations. The evaluation was carried out on two major classes: login not required and login required. Pages to be evaluated include pages of all navigation menus and pages contained in one course that applies the default template. The login not required class consists of 11 pages, with a total of 707 components. From the total components, there are 516 or an average of 73% of components that comply with the minimum contrast ratio. Then as many as 191 components, or an average of 27% components, do not comply with the minimum contrast ratio. The login required class consists of 17 pages with a total of 1916 components. From the total components, there are 1257 components or an average of 66% of components that comply with the minimum contrast ratio. Then as many as 659 components, or an average of 34% of the components, do not comply with the minimum contrast ratio. Contrast ratio recommendations are made for components with a contrast ratio below the minimum WCAG 2.1 standard. From the total components that failed, 191 components for the login not required class and 659 components for the login required class. The results obtained from the contrast ratio recommendations given were 100% of the components that had passed or complied with the minimum contrast ratio standard WCAG 2.1.

Keywords: evaluation, contrast ratio, e-learning, color blindness, wcag 2.1

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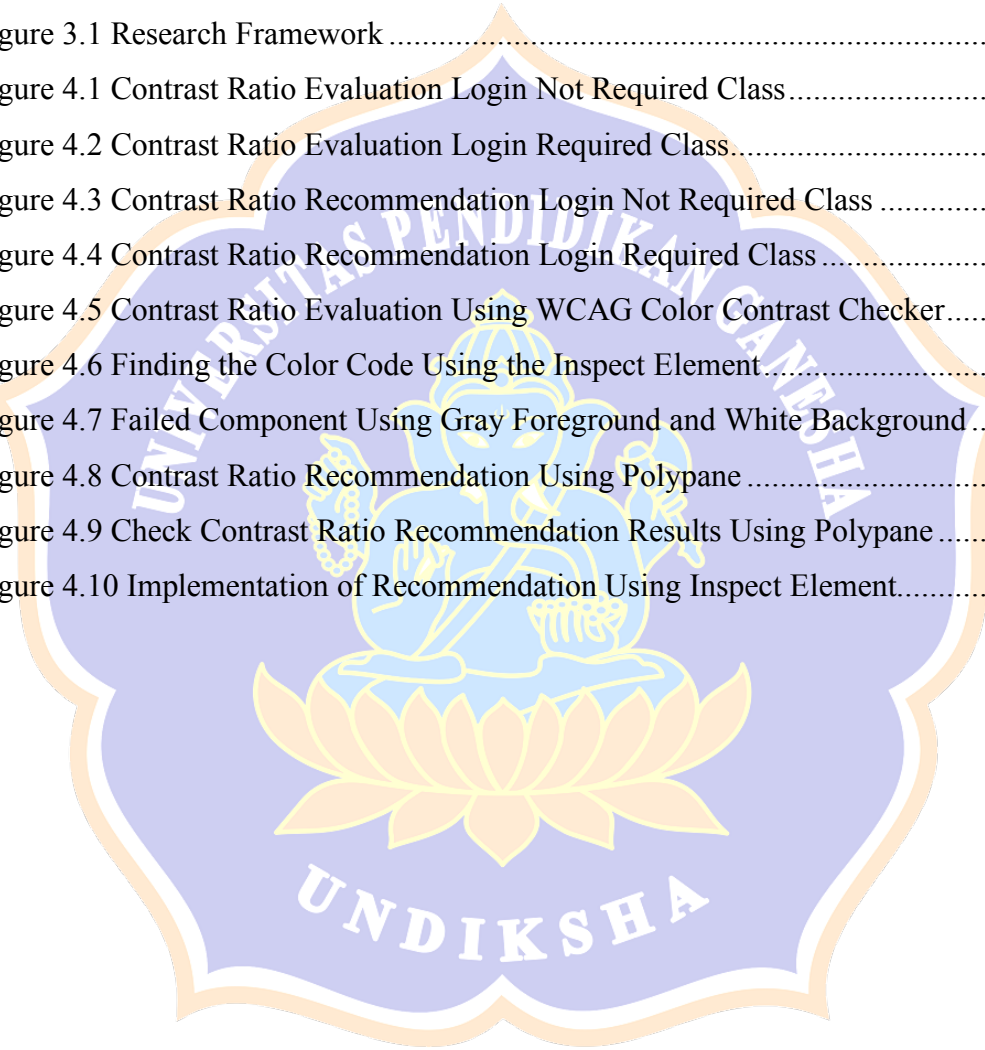
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