



**SDSU**  
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**MS Computer Science**  
**THESIS DEFENSE**

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*A Javascript Framework for Web Page Layouts*

## Abstract

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One of the most important aspects of any website is the layout design. Layout design deals with the organization of different elements of a web page like text, images, etc., into an effective and visually attractive arrangement. Creating a web layout from scratch is a very time-consuming and challenging task. This requires the web designer to have in-depth knowledge of HTML and CSS properties. Using CSS to create web layouts is not very straightforward compared to using it for styling the website like including colors, fonts, etc., As the layout design becomes complex, the creation of such layouts will become intricate and might involve using CSS hacks for achieving the layout. It is also difficult to make sure that these layouts work well across different browsers and screen sizes.

In this thesis, the two most commonly used layouts in web design are identified, and the problems involved in the creation of these layouts are explored. To simplify the layout creation process, two libraries are developed using javascript, for creating these layouts. The GridLayout library is developed to build grid layout in web pages. Using this library, four different variations in grid layout can be achieved. The BorderLayout library is developed to create border layout or holy grail layout in web pages. Using this library, two different variations in border layout can be achieved. These libraries are designed to be easy to use and highly customizable according to the requirement of the web designer.

## Thesis Committee

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Carl Eckberg, Thesis Chair, Department of Computer Science  
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Mark Dunster, Department of Mathematics & Statistics