

material didático

Bootstrap
Prof. Fábio Colombini





Introdução



- O Bootstrap é um framework de Frontend para Web, e para Mobile também, que agiliza o desenvolvimento de sites e aplicações web.
- Ele foi criado na sede do Twitter em 2010 por Mark Otto e Jacob Thornton. Era para ser, apenas, uma ferramenta interna do pessoal do Twitter, e era chamdo de *Twitter Blueprint*, antes de ser publicado como *open-source*.
- No Bootstrap você pode utilizar vários códigos HTML e CSS padronizados, que definem a tipografia, os formulários, botões, tabelas, layouts, navegação, elementos de interface de usuário entre outros.
 - O Bootstrap é um framework para criar interfaces de usuário para Web (e Mobile Web)
 - O Bootstrap define estilos CSS, Componentes reutilizáveis
 - É um dos frameworks de frontend muito populares



Aplicar Bootstrap em páginas HTML;

- http://getbootstrap.com/
- download
- package manager
 - npm i bootstrap@5.3.3
- CDN



Usando CDN

```
<!DOCTYPE html>
<html>
<head>
<title>Site com Bootstrap (Tecnologias Web) </title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
                                                                      Css
<!-- Bootstrap -->
klink
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/boo
tstrap.min.css" rel="stylesheet" integrity="sha384-
T3c6CoIi6uLrA9TneNEoa7RxnatzjcDSCmG1MXxSR1GAsXEV/Dwwykc2MPK8M2H
N" crossorigin="anonymous">
</head>
<body>
<h1>Tecnologias Web</h1>
                                                                   JavaScript
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/boots
trap.bundle.min.js" integrity="sha384-
C6RzsynM9kWDrMNeT87bh950GNyZPhcTNXj1NW7RuBCsyN/o0jlpcV8Qyq46cDf
L" crossorigin="anonymous"></script>
</body>
</html>
```



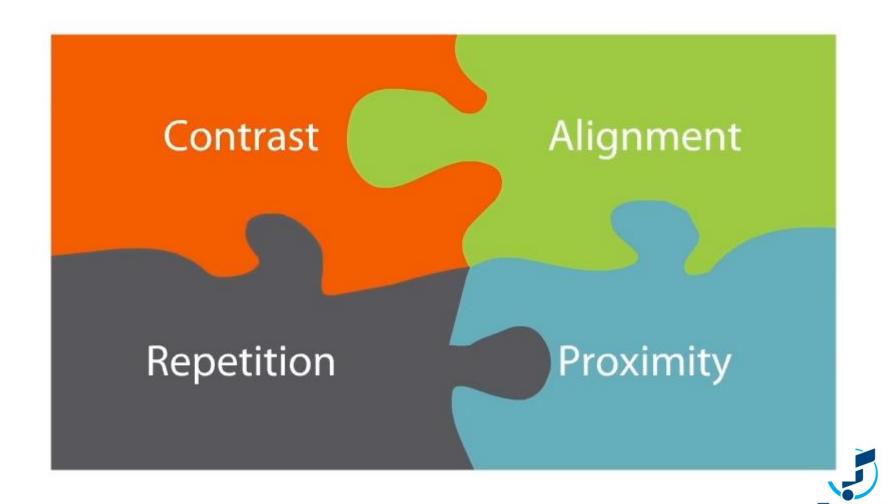
Quatro princípios do Design Gráfico

Contrast | Alignment | Repetition | Proximity





Quatro princípios do Design Gráfico



Quatro princípios do Design Gráfico

Contrast

CARP AND CARP CULTURE

Fish culture

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Ancient Romans

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infected with pidenel, piles, cathish, and other predictory varieties. It is, therefore, not only feable, but desirable, to continue under such conditions the ancient methods. This method, however, is not regarded as advention the suiture in its modern and restricted scare.

Yang-Tse-Kiang

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Alignment

Fish culture

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Ancient Remans

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infested with pickerel pike, cathsh, and other precisions warning. It is, and other precisions warning. But therefore, not only feesible, but desirable, the continue under such conditions the ancient method. This method, however, i) not regarded as scientific fish culture in its modern and re stricted sense.

The Chinese were undoubtedly the

first to make a radical advance in the

Yang-Tse-Klang

methods of fish culture. According to missionaries, who penetrated the progress of China at an early day a multitude of fish of many varietie ascend the rivers of Klane si, and into through the rice fields, in these which are soon hatched. Both the eggs and the young fish are the riparian proprietors. One of the French Jesuits, who at an early day traversed several of the Chinese provinces, in a published account of his travels, referred to the fish-Cultural industry as follows: "In the great river Yang-tue-klang, not far from the city of Kiewsking four in the vince at Klang-si, at certain times of the year, are assembled a prolligious number of boats for the purchase there of the eggs of fain. Toward the month of May, the country people bar the river in vertous pieces with mats and hurdles for a length of about nine or ren leagues, leaving only sufficient space for the parrage of the boats. The eggs of the fish are stopped by these hurdles. They can distinguish them by the eye, where other persons can

Repetition

CARP& CARP CULTURE



Fish culture

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Ancient Romans

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Yang-Tsa-Elang

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Proximity

CARP and

CARP CULTURE

Fish Culture

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Yang-Tse-Klang

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Contraste

- O contraste envolve a diferença deliberada entre elementos, como cores, tamanhos, formas ou tipografia, para criar destaque e ênfase.
- O contraste é fundamental para direcionar a atenção do espectador para os elementos mais importantes de uma composição.
- Um bom uso do contraste pode tornar um design mais impactante e legível.

Contrast

CARP AND CARP CULTURE Fish culture predatory varieties, it is, therefore, not only Fish culture being barely a quarter of feasible, but desirable, to continue unde a'century in existence in this country, it will such conditions the ancient methods. This be proper to commence this paper with a brief summary of its rise and progress in method, however, is not regarded as scientific fish culture in its modern and re foreign countries. The early foreign writers always allusted to fisheries as the agriculture of waters, apparently considering seas, lakes, thers, Yang-Tse-Kiang streams, and ponds incoheustible preserved The Chinese were undoubtedly the first to of food which could never be imp make a radical advance in the methods of by the wants or desires of man. At a fish culture. According to missionaries, who penetrated the interior of China at an early comparatively remote epoch, however, the many observing and enlightened minus day, a multitude of fish of many variaties discovered that fisheries were but hervestings, and that in order to secure ditches which curvey water through the rice epeated satisfactory crops, some system of fields in these ditches they deposit their oggs, which are soon hatched. Both the eggs and the young fish are the source of considerable income to the riperian **Ancient Romans** proprietors. One of made until marking began to focusis their normadic habits, and became settled in permanent locations. The first attempts at who at an early day traversed several of the Chinese fish culture of which we have any history, were made by Chinese and ancient Romans. The methods adopted by the people of those of his provels. fish into natural and artificial reservoirs, fish-Cultural res supplying them with artificial food, but generally permitting them to prey upon each other. This method is still in vogue to some extent in all parts of the civilized In the great rice world, and even among half-civilized people. Many of the Northern and Middle States have dry of practically adopted this method, by the ntroduction of the much-prized black base into their waters. This valuable variety of food. Simes of the year



Alinhamento

- O alinhamento envolve a organização precisa dos elementos em relação a uma linha horizontal ou vertical imaginária.
- O alinhamento ajuda a criar uma sensação de ordem e coesão em uma composição.
- Elementos alinhados criam uma conexão visual e facilitam a leitura e a compreensão do design.

Alignment



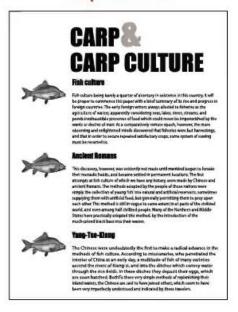


material didático

Repetição e Padrão

- A repetição envolve o uso consistente de elementos de design, como cores, formas ou estilos, ao longo de uma composição ou projeto. Isso ajuda a criar consistência e coesão visual.
- A criação de padrões repetitivos pode ser usada para transmitir uma sensação de unidade e identidade visual

Repetition

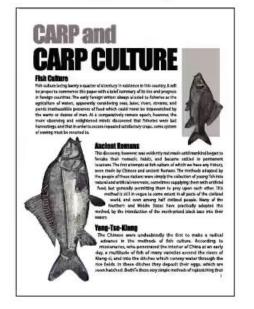




Proximidade

- Princípio que se relaciona mais com a organização espacial de elementos em uma composição.
- Ele sugere que elementos visualmente relacionados devem ser agrupados próximos uns dos outros para criar uma relação entre eles.
- Isso ajuda a organizar o conteúdo de maneira lógica e a facilitar a compreensão.

Proximity





Background colors



Cores de Fundo



```
<div class="myDiv bg-danger"></div>
<div class="myDiv bg-primary"></div>
<div class="myDiv bg-secondary"></div>
```



Containers



Containers e Rows





SISTEMA DE GRID



Containers e Rows

```
<section class="container mt-3">
    <div class="row">
        <div class="col-6 bg-primary</pre>
                                              py-3"></div>
        <div class="col-3 bg-secondary</pre>
                                             py-3"></div>
        <div class="col-3 bg-success"</pre>
                                              py-3"></div>
    </div>
    <div class="row">
        <div class="col-4 bg-danger</pre>
                                              py-3"></div>
        <div class="col-2 bg-warning"</pre>
                                              py-3"></div>
        <div class="col-6 bg-dark</pre>
                                              py-3"></div>
    </div>
</section>
```



Row

- As rows (linhas), no Bootstrap, definem as divisões horizontais do seu layout.
- Essas rows devem ficar dentro do container, e podem ser aplicadas a qualquer tag que defina estrutura, como div, header e footer.

OBS: as linhas sempre ficarão uma embaixo da outra.



Column

- As columns (colunas), no Bootstrap, definem as divisões verticais das rows (linhas) do seu layout.
- Columns devem estar sempre dentro das rows, e elas definem espaços na row para que você coloque os itens visuais ou conteúdos que foram projetados.
- Para criar uma column você pode criar uma div com os prefixos pré-definidos pelo Bootstrap, como no exemplo:

Neste exemplo, temos uma linha (.row) com duas colunas (.col-6).



Bootstrap – Construção (Column)

No exemplo, nos tínhamos a seguinte soma:

Mas, você pode fazer qualquer combinação:



Grid System

| span
1 |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | spa | an 4 | | | spa | an 4 | | | spa | an 4 | |
| span 4 | | | | span 8 | | | | | | | |
| | | spa | in 6 | | | | | spa | ın 6 | | |
| span 12 | | | | | | | | | | | |



Grid System



```
<section class="myDiv container">
   <div class="row">
        <div class="col bg-primary">1</div>
   </div>
   <div class="row">
        <div class="col bg-primary">1</div>
        <div class="col bg-secondary">2</div>
   </div>
   <div class="row">
        <div class="col bg-primary">1</div>
        <div class="col bg-secondary">2</div>
        <div class="col bg-warning">3</div>
   </div>
   <div class="row">
        <div class="col bg-primary">1</div>
        <div class="col bg-secondary">2</div>
        <div class="col bg-warning">3</div>
        <div class="col bg-dark text-info">4</div>
    </div>
```



Breakpoint



Breakpoints

min-width: 1200px - XL

min-width: 992px - LG

min-width: 768px - MD

min-width: 576px - SM

max-width: 575.98px - xtra-SM

•**Extra small (xs) < 576

•Small (sm) ≥576px

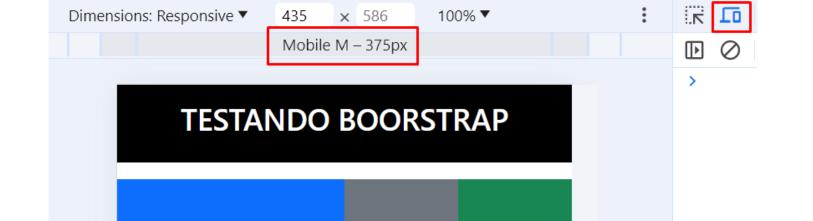
•Medium (md) ≥768px

•Large (lg) ≥992px

•Extra large (xl) ≥1200px

•Extra extra large (xxl) ≥1400px





Exemplo de Tabela com Bootstrap

#	Nome	Email	Cidade
1	João Silva	joao.silva@example.com	São Paulo
2	Maria Oliveira	maria.oliveira@example.com	Rio de Janeiro

Fabio Colombini@2024



Breakpoints



TABELA COM BOOTSTRAP



Tabela com Bootstrap

```
<div class="container mt-5">
   <h2 class="mb-4">Exemplo de Tabela com Bootstrap</h2>
   <thead class="thead-dark">
      >
       #
       Nome
       Email
       Cidade
      </thead>
    >
       1
       João Silva
       joao.silva@example.com
       São Paulo
      </div>
```



Tabela com Bootstrap

Pode colocar toda table dentro de uma div com class="table-responsive"

```
<div class="table-responsive">
</div>
```



Alinhamento e Offset (Flex Box)



Alinhamento e Offset

Classes:

- d-flex
- flex-column
- justify-content-center
- align-items-center
- etc



Alinhamento e Offset

- justify-content-start (row)
- justify-content-center
- justify-content-end

- justify-content-around (row)
- justify-content-between



Alinhamento e Offset

Offset-1 a 11



```
<div class="row">
    <div class="col-4 col-sm-3 col-md-1 bg-primary</pre>
                                                               py-5"></div>
    <div class="col-4 col-sm-3 col-md-1 bg-secondary</pre>
                                                               py-5"></div>
    <div class="col-4 col-sm-3 col-md-1 bg-success"</pre>
                                                               py-5 offset-3
                                                                              '></div>
</div>
<div class="row">
                                          py-5 " ></div>
    <div class="col-3 bg-danger"</pre>
    <div class="col-2 bg-warning"</pre>
                                          py-5 offset-1'></div>
    <div class="col-6 bg-dark</pre>
                                          py-5"></div>
A 142...
```



Padding e Margin



Padding e Margin

- Margin (m) de 1 a 5
 - mt-5 top
 - mb-3 bottom
 - ms-1 start
 - me-2 end
 - mx-1 eixo X
 - my-2 eixo Y
 - m-5 X e Y
- Padding (p)
 - pt-5



Typography



Typography

- text-lowercase ou uppercase
- text-capitalize
- display-1 to 4





Buttons



Button

Button colors



Outline Buttons





Button

- Button Groups
 - btn-group
 - btn-group-vertical

```
Chapter 1 Chapter 2 Chapter 3

Chapter 1

Chapter 2

Chapter 3
```



Componentes



Alert

```
<div id="liveAlertPlaceholder"></div>
    <button type="button" class="btn btn-primary" id="liveAlertBtn">Show live alert</button>
const alertPlaceholder = document.getElementById('liveAlertPlaceholder')
const appendAlert = (message, type) => {
 const wrapper = document.createElement('div')
 wrapper.innerHTML = [
    `<div class="alert alert-${type} alert-dismissible" role="alert">`,
       <div>${message}</div>`,
       <button type="button" class="btn-close" data-bs-dismiss="alert" aria-</pre>
label="Close"></button>',
    '</div>'
 ].join('')
 alertPlaceholder.append(wrapper)
}
const alertTrigger = document.getElementById('liveAlertBtn')
if (alertTrigger) {
  alertTrigger.addEventListener('click', () => {
    appendAlert('Nice, you triggered this alert message!', 'success')
 })
```



Fomulário

```
<form>
 <div class="mb-3">
    <label for="exampleInputEmail1" class="form-label">Email address</label>
    <input type="email" class="form-control" id="exampleInputEmail1" aria-describedby="emailHelp">
    <div id="emailHelp" class="form-text">We'll never share your email with anyone else.</div>
 </div>
 <div class="mb-3">
   <label for="exampleInputPassword1" class="form-label">Password</label>
    <input type="password" class="form-control" id="exampleInputPassword1">
 </div>
 <div class="mb-3 form-check">
    <input type="checkbox" class="form-check-input" id="exampleCheck1">
    <label class="form-check-label" for="exampleCheck1">Check me out</label>
 </div>
 <button type="submit" class="btn btn-primary">Submit</button>
</form>
```



Select



Principais Componentes

- Accordion
- Card
- Carrousel
- Navbar
- Toast

Icones

