Beamer Example

A BEAMER TEMPLATE FOR SEG-2022/UH
University of Houston
Department of ECE

Outline

Outline

Introduction

- This is the template for UH slides, which includes:
  - **Table**: Check table 1.
  - **Figure**: Check fig. 1.
  - **Block and Equation**: Check (1-1).
  - **Theorem**: Check theorem 1.
  - **Algorithm**: Check algorithm 1.
  - **Slide transition**: Check Subsection 2.6.
- And here we would like to test the references: *Zeiler et al.*[1], *Yang et al.*[2], *Dong et al.*[3].

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[1] M. D. Zeiler, D. Krishnan, G. W. Taylor, and R. Fergus, "Deconvolutional networks," in *2010 IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, Jun. 2010, pp. 2528–2535.

[2] J. Yang, Z. Wang, Z. Lin, S. Cohen, and T. Huang, "Coupled dictionary training for image super-resolution," *IEEE Transactions on Image Processing*, vol. 21, no. 8, pp. 3467–3478, Aug. 2012.

[3] C. Dong, C. C. Loy, K. He, and X. Tang, "Image super-resolution using deep convolutional networks," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 38, no. 2, pp. 295–307, Feb. 2016.

Outline

Test
Table test

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- Test table, which is shown in table 1.

Table: Parameters of *Daubechies*'s filter.

n	$h[n]$	$g[n]$
0	0.3327	-0.0352
1	0.8069	-0.0854
2	0.4599	0.1350
3	-0.1350	0.4599
4	-0.0854	-0.8069
5	0.0352	0.3327

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Figure test

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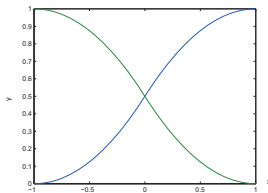Algorithm test
Slide transition test
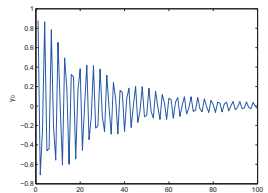
- Test inner subgraphs, i.e. fig. 1(a) and fig. 1(b).

(a) $D = 1$ (b) $D = 0.5$

Figure: Test graphs.

Test
Equation test

■ Test blocked equations, i.e. (1-1), (1-2).

SVM loss function

Here we show a simple example of subequations in (1-1):

$$\frac{\partial \mathcal{L}(\mathbf{w},\ b)}{\partial \mathbf{w}} = \mathbf{w} + C \sum_i \frac{\partial \ell_i}{\partial \mathbf{w}}, \qquad (1\text{-}1)$$

$$\frac{\partial \mathcal{L}(\mathbf{w},\ b)}{\partial b} = C \sum_i \frac{\partial \ell_i}{\partial b}, \qquad (1\text{-}2)$$

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Theorem test

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■ Test theorems, i.e. theorem 1 and theorem 2.

> **Theorem (Example Theorem 1)**
>
> *Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus.*

> **Theorem (Example Theorem 2)**
>
> *Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue.*

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Algorithm test

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■ Test algorithm, i.e. algorithm 1.

Algorithm 1 DWT Algorithm

Input: Sequence $\mathbf{x}$ in time domain
Output: Sequence $\hat{\mathbf{x}}$ in wavelet domain
  1: $N = \lfloor \log_2(\mathbf{length}(\mathbf{x})) \rfloor$;
  2: $\mathbf{c}_N = \mathbf{x}$, $\hat{\mathbf{x}} = \varnothing$;
  3: **for** i from 1 to N **do**
  4:     $\mathbf{c}_{N-i}, \mathbf{d}_{N-i} = \mathrm{analysis\_filter}(\mathbf{c}_{N-i+1})$;
  5:     insert $\mathbf{d}_{N-i}$ at the beginning of $\hat{\mathbf{x}}$.
  6: **end for**

Test
Slide transition test

- This is transition test, let's begin:

Test
Slide transition test

- This is transition test, let's begin:
  - This is the first item.

Test
Slide transition test

- This is transition test, let's begin:
  - This is the first item.
  - This is the second item.

Test
Slide transition test

- This is transition test, let's begin:
  - This is the first item.
  - This is the second item.
  - This is the third item.

Test
Slide transition test

- This is transition test, let's begin:
  - This is the first item.
  - This is the second item.
  - This is the third item.
- We will show 3 items simultaneously.

Test
Slide transition test

- This is transition test, let's begin:
  - This is the first item.
  - This is the second item.
  - This is the third item.
- We will show 3 items simultaneously.
  - This is the first item.
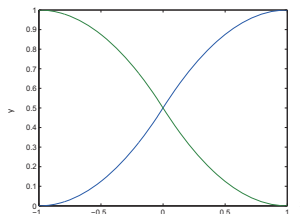 - This is the second item.
  - This is the third item.

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Slide transition test

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- This is transition test, let's begin:
    - This is the first item.
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- We will show 3 items simultaneously.
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Figure: Test graph.

Thank you for listening!

IT'S TIME FOR Q&A.