Beamer Example

A BEAMER TEMPLATE FOR SEG-2021/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].

[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

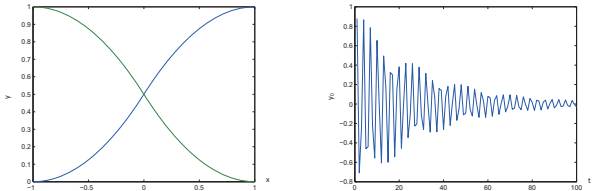
- Test table, which is shown in table 1.

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

Test
Figure 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):

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

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

Test
Theorem test

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

Theorem (Example Theorem 1)

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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.

Test
Algorithm test

- 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 = $\lfloor \log_2(\mathrm{length}(\mathbf{x})) \rfloor$;
2: $\mathbf{c}_N = \mathbf{x}$, $\hat{\mathbf{x}} = \varnothing$;
3: **for** i from 1 to N **do**
4: $\quad \mathbf{c}_{N-i}, \mathbf{d}_{N-i} = \mathrm{analysis\_filter}(\mathbf{c}_{N-i+1})$;
5: $\quad$ 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:
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  - This is the third item.
- We will show 3 items simultaneously.

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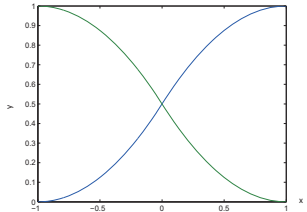

Figure: Test graph.

Thank you for listening!

IT'S TIME FOR Q&A.