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.

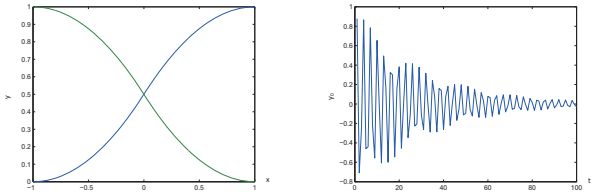
Table: Parameters of *Daubechies*'s filter.

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)

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. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi.

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. Etiam facilisis. Nunc elementum fermentum wisi.

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.

Test

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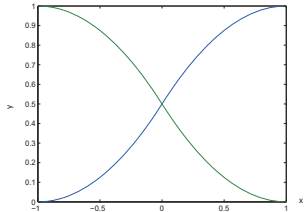

Figure: Test graph.

Thank you for listening!

IT'S TIME FOR Q&A.