Unseen Style Transfer
Based on a Conditional Fast Style Transfer Network

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1. Introduction

• Neural artistic style transfer by Gatys et al. (2015) [A]

2. Conditional Fast Style Transfer

• Add a style condition input to ConvDeconv network.
  - Add a fusion layer and a style input
  - Style input: one-hot conditional vector
  - Base network: Johnson’s ConvDeconv network [B] each layer has BN and ReLU except last one.

3. Unseen Style Transfer Network

• Add a style condition network to the cond. FST network.
  - Confirmed that a real-value condition vector is possible.
  - Style cond. vec. can be generated by a CNN (not only hand)
  - Problem of style condition network which generates a style condition vectors from a given style image directly.
  - As a result, “Unseen Style Transfer Net” got possible!!

4. Concurrent Works (mini survey)

(A) Multiple Styles

(B) Arbitrary Styles

References
