

# Prose for a Painting

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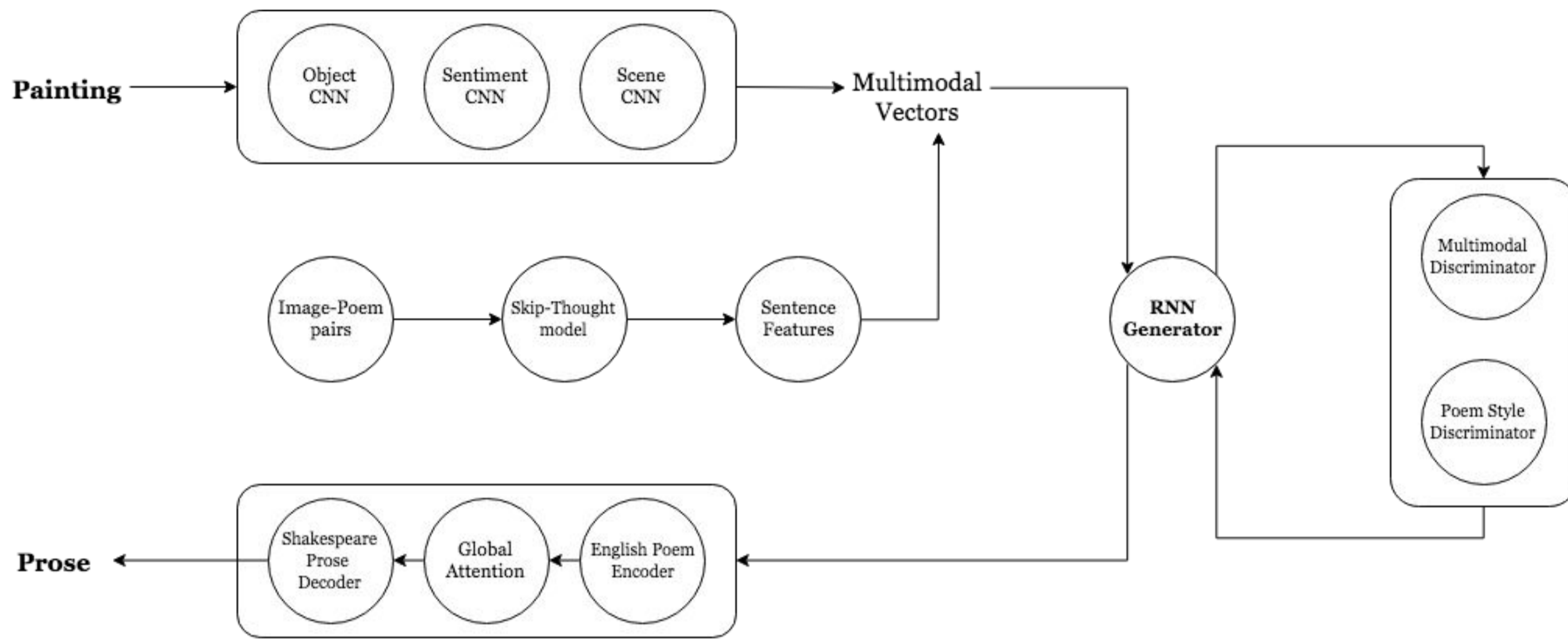
Data, Models, and Code: [github.com/prerna135/prose-for-a-painting](https://github.com/prerna135/prose-for-a-painting)

## Prose for a Painting Model Architecture

Painting captions are often dry and simplistic which motivates us to describe a painting creatively in the style of Shakespearean prose. This is a difficult problem, since there does not exist a large supervised dataset from paintings to Shakespearean prose. Our solution is to use an intermediate English poem description of the painting and then apply language style transfer which results in Shakespearean prose describing the painting. We rate our results by human evaluation on a Likert scale, and evaluate the quality of language style transfer using BLEU score as a function of prose length. We demonstrate the applicability and limitations of our approach by generating Shakespearean prose for famous paintings



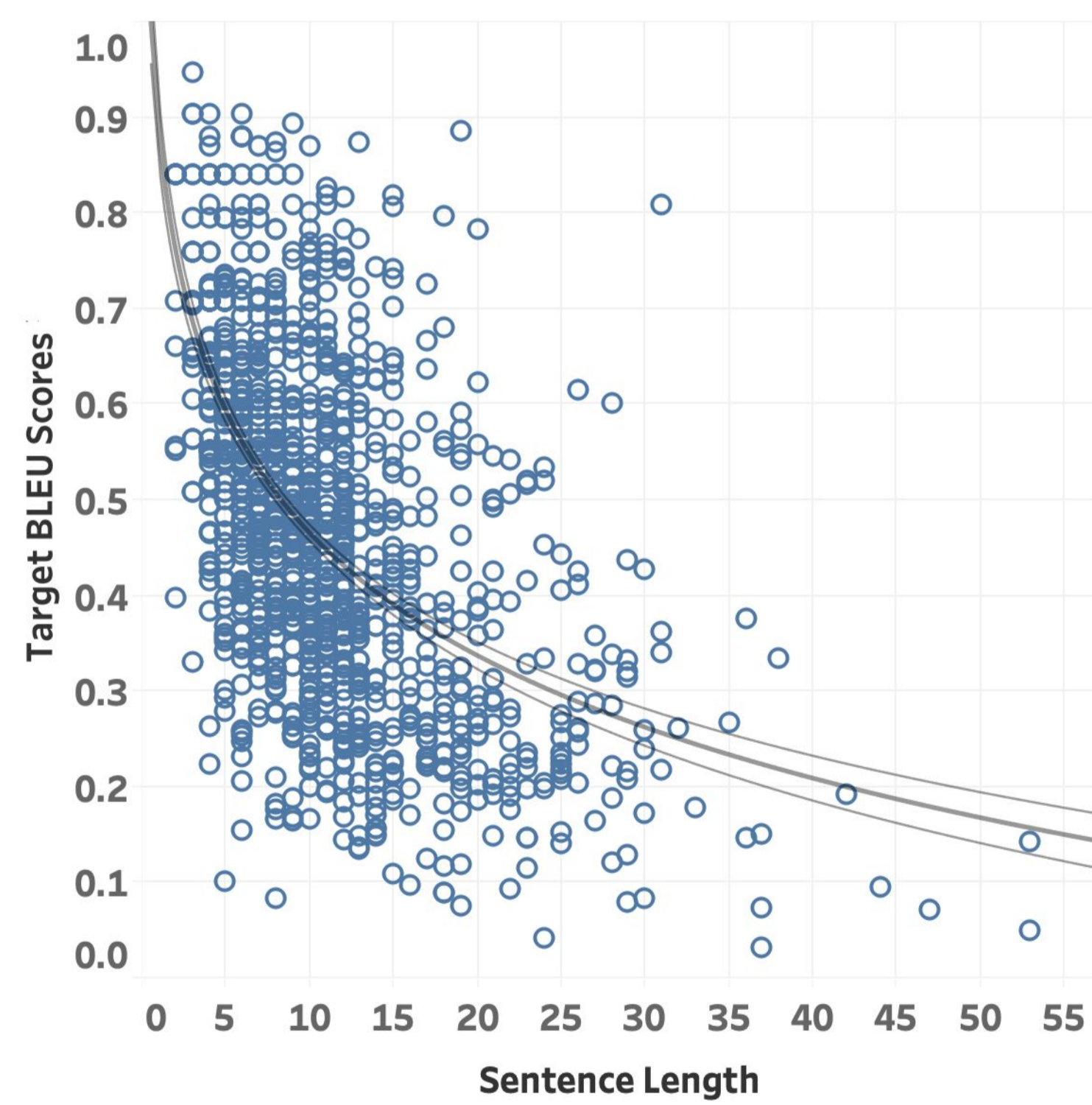
" I see thee  
Stand in place  
Turn back to home  
To go to thee  
You are my lord  
Your will be still the dance  
You take your smile  
Of my heart  
With thine eyes "



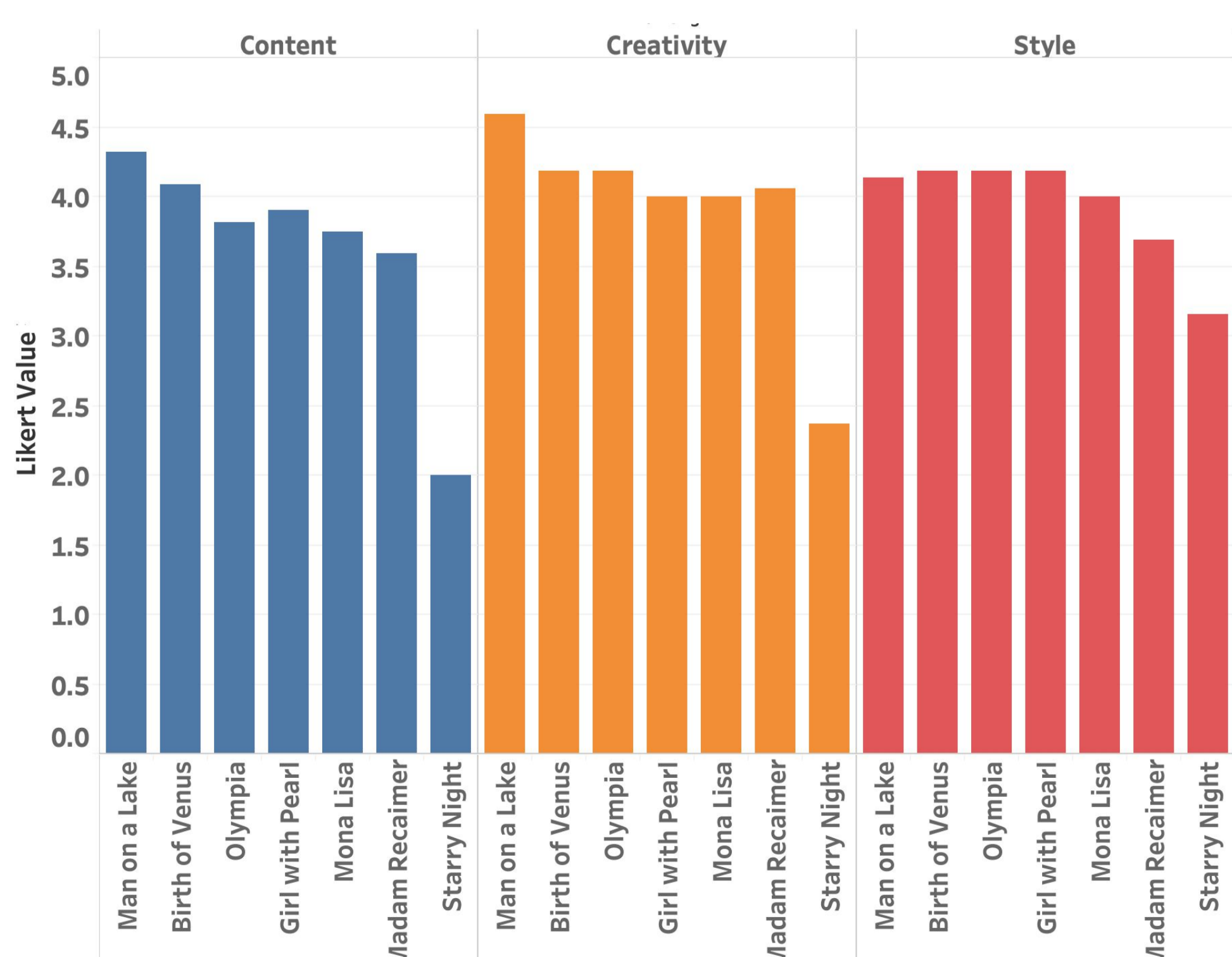
Sample result: Input painting and output synthesized Shakespeare prose

Model architecture: Input is a painting (top left) for which we first generate an English poem using 3 CNNs for feature extraction, and an RNN generator as an agent with 2 discriminators (center right) which provide feedback to the agent for model improvement. The style transfer model takes as input the generator output and performs text style transfer using a seq2seq model with global attention to synthesis the output prose (bottom left)

## Results



BLEU score versus source sentence length



Survey results: Average rating of content, creativity, and style on a Likert scale



I am not a seashell  
I have been wounded and sober train to be  
I find myself happy to be free again  
Don't you know I am going  
End will be afraid I know  
Will be afraid of love and love  
And I want to be free

I am not a wench mad  
I have been much and have sober  
I take my place be free my place , my lord , be well  
Do not you know me , sir , I am not out of your grief  
Be out of my life , my lord ,  
Be shall be kind of love and love  
And i would be free from thence from thence !



I love you and my love is always  
I want to live with you  
I feel like you in my heart  
And you are  
Your love is not  
Your heart

Love you and my love is ever sad  
I would be with you  
I take my heart in my heart  
And you are not  
Your affections is not well  
Thy heart



Now i have been a sinful man  
Who shall not hear his name  
Have i not seen my fate  
But why should i know  
How the wretched deeds  
Are equal

Now i have a sinful man's thought !  
Who shall not hear his name  
I have not my leave  
But why should i know him well  
enough  
How the wretched my love  
Be equal so

Sample results: Painting (left), synthesized English poem (center) and Shakespearean Prose (right) for "Girl with the pearl earring", a painting of a man on a lake, and "Portrait of Madame Recamier"