D16[DEMO] KuzushijiFontDiff: Diffusion Model for Japanese Kuzushiji Font Generation
310[Oral Talk] KuzushijiDiffuser: Japanese Kuzushiji Font Generation with FontDiffuser

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Abstract

Our method could **convert modern text into Kuzushiji text** based on the reference image.

Methodology

We proposed a **Kuzushiji font generation framework** called KuzushijiDiffuser based on the Diffusion model.

Our model is composed of three main components

1. The stroke style module

   A multiple heads stroke encoder[1] and overall font encoder.

2. The content retaining module

   A font content patch discriminator and content encoder

3. The conditional diffusion model

   Diffusion model is based on Fontdiffuser[2].

Repaired Kuzushiji Data

Morphological operations to eliminate noise in the fonts.

Results

1. Generation Results

Transformation results from modern texts to Kuzushiji texts.

2. Comparison with existing methods

Achieved state-of-the-art performance in Kuzushiji font generation.

3. Demo System

Transfer any modern text to Kuzushiji text in real time.

[1] Park, S., Chun, S., Cha, J., Lee, B., Shim, H.: Multiple heads are better than one: Few-shot font generation with multiple localized experts. In: ICCV. 2021
[2] Yang, Z., Peng, D., Kong, Y., Zhang, Y., Yao, C., Jin, L.: Fontdiffuser: One-shot font generation via denoising diffusion with multi-scale content aggregation and style contrastive learning. In: AAAI. 2024