

基于漫画线稿的自动上色技术研究

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目录



目前进展



遇到问题



拟解决方法



后续安排



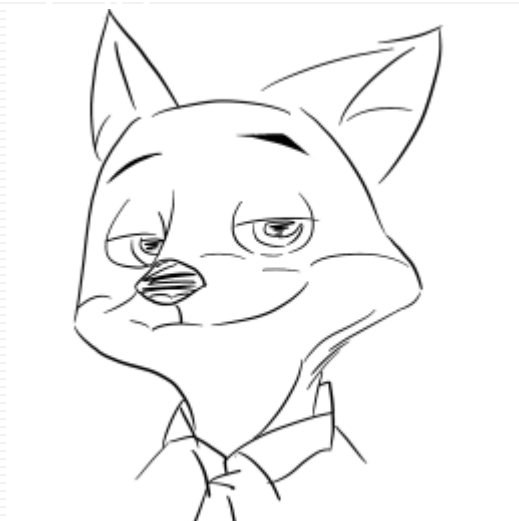
PART 01

目 前 进 展

Automatic Image Colorization (全自动)

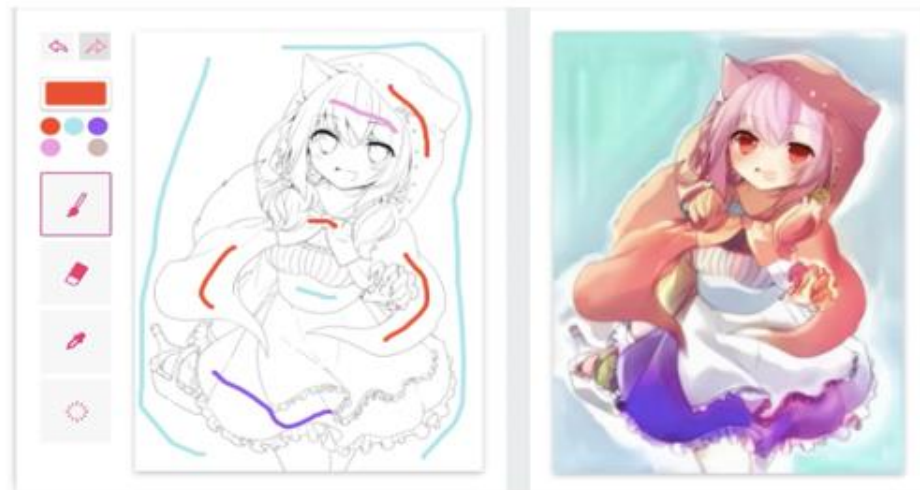
User Guided Image Colorization (用户交互)

line sketch



测试“输入”
无监督

color strokes



reference img



palette



Palette
model





Automatic Image Colorization



Learning Representations for Automatic Colorization,
ECCV, 2016

VGG-16

User Guided Image Colorization

Bicycle-GAN



*Auto-painter: Cartoon Image Generation from Sketch
by Using Conditional Generative Adversarial Networks*

Pix2Pix



*Style Transfer for Anime Sketches with Enhanced
Residual U-net and Auxiliary Classifier GAN,*
ACPR, 2017

Residual U-net + AC-GAN

Comicolorization: Semi-Automatic Manga Colorization,
SIGGRAPH Asia, 2017

CNN



PART 02

遇到 问题



Bicycle-GAN



Pix2Pix



Residual U-net + AC-GAN



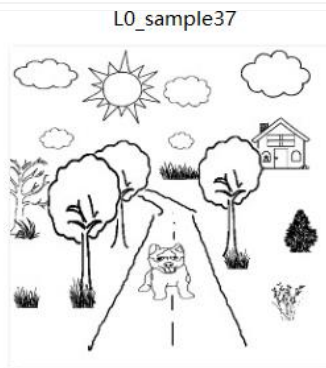
CNN



成对数据集

线稿+ 彩色

Sketchy scene



191



192



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197

线稿数据库



232



233



252



253



257



258



PART 03

拟 解 决 方 法

彩色动漫数据库

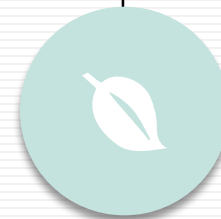
自动上色

不使用成对数据集

1

2

3



manga109
nico seiga
pixiv dataset
Danburoo

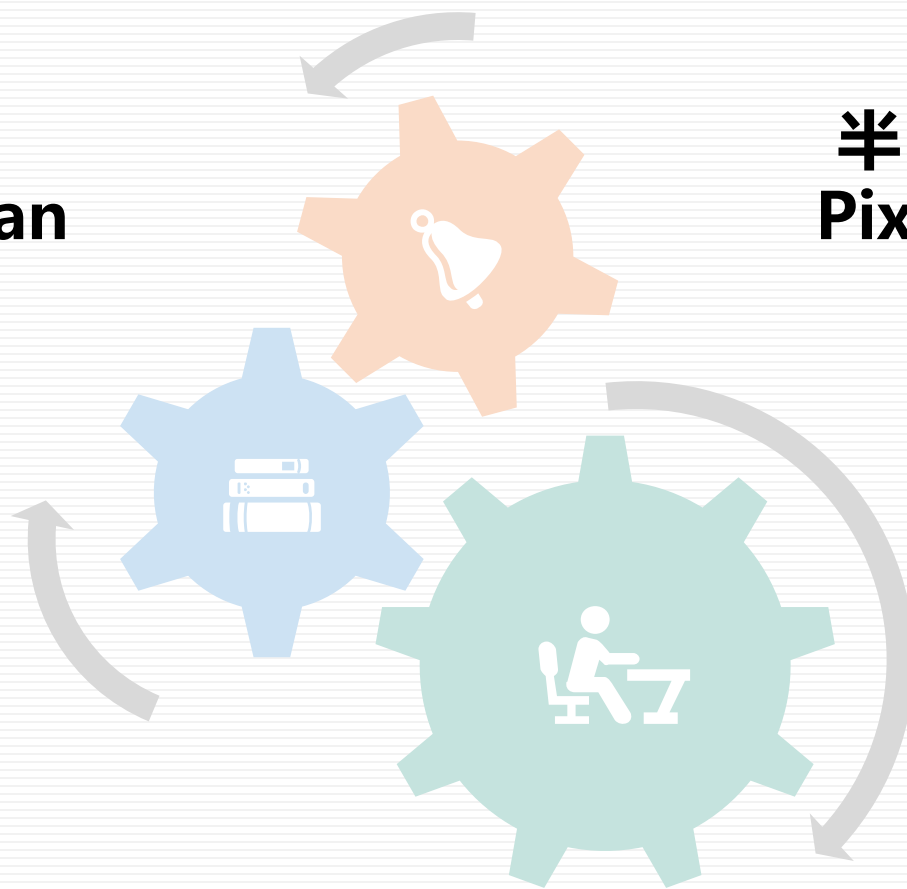
借助已完成的项目,
将线稿数据库输入,
批量生成彩色动漫
数据库

Cycle-gan?
训练难度大,
不易收敛
“风格”
数据集分类

**全自动
bicycle-gan**

**半自动
Pix2Pix**

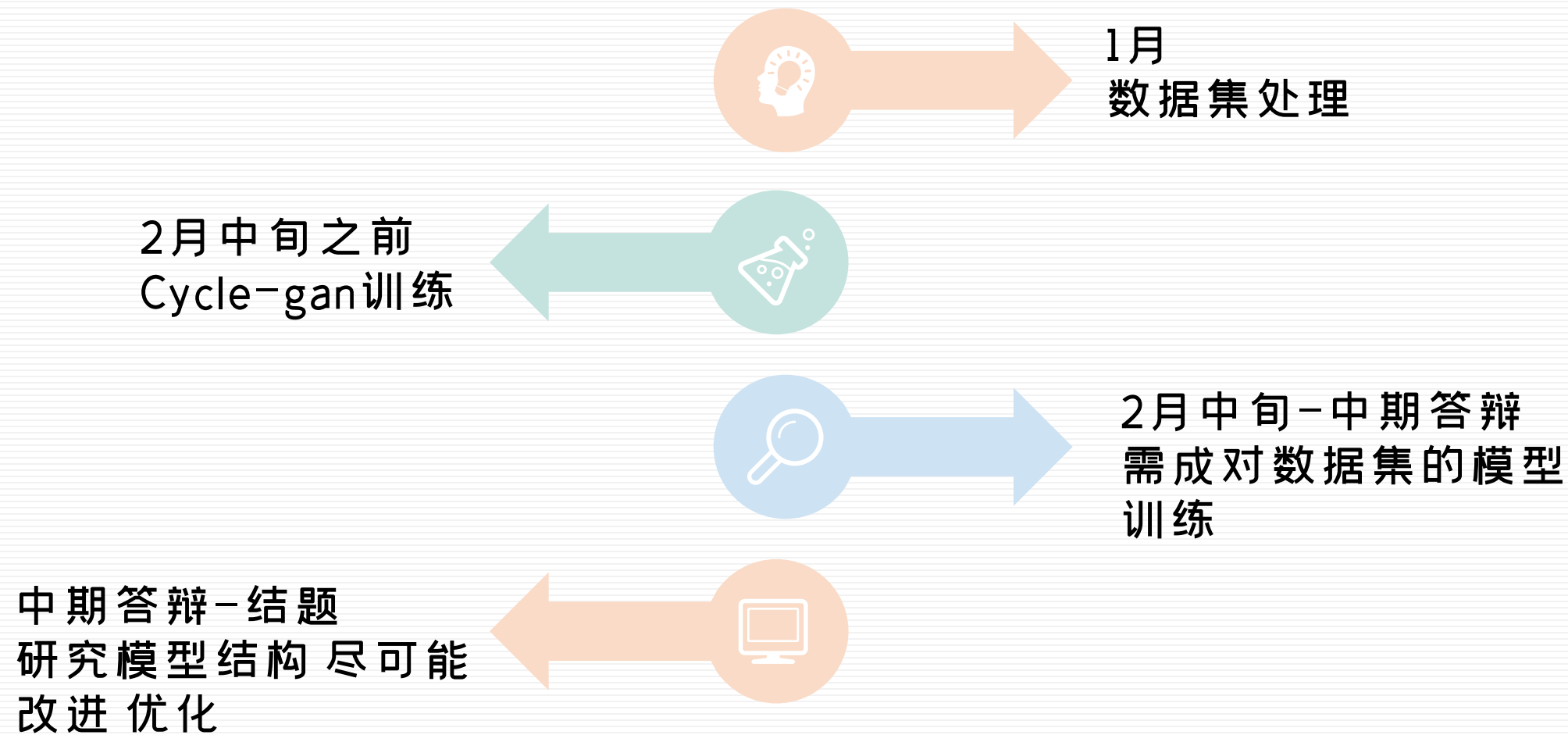
**全自动
Cycle-gan**





PART 04

后 续 安 排





T H A N K U

THANK U