

Gerry Gao

SOFTWARE ENGINEER

+86 188 0018 5532 | gerry@pku.edu.cn | gerry.ml | hologerry

Education

Peking University

School of Electronics Engineering & Computer Science

M.E. COMPUTER APPLICATION TECHNOLOGY, GPA: 3.4/4.0

September 2018 - June 2021

- **Wangxuan Institute of Computer Technology**, Computer Vision, Supervisor: **Prof. Jianguo Xiao**
- **Main Courses:** Algorithm Analysis and Design, Machine Learning, Deep Learning, Pattern Recognition, Intelligent Optimization Methods

Beijing Institute of Technology

School of Computer Science & Technology

B.E. INTERNET OF THINGS, GPA: 83.23/100

September 2014 - June 2018

- **English:** CET-4 506, CET-6 430

Experience

Apple

December 2019 - PRESENT

SOFTWARE ENGINEER INTERN (PART TIME)

Beijing

- Developed a detection model based on YOLOv3 using PyTorch and improved the recall of the entire system by 8%.
- Implemented a instance segmentation model based on Mask R-CNN and increased the recall score of the entire system by 12%.

Publications

- **Yue Gao***, Yuan Guo*, Zhouhui Lian, Yingmin Tang, Jianguo Xiao, "Artistic Glyph Image Synthesis via One-Stage Few-Shot Learning", **ACM Transactions on Graphics (SIGGRAPH Asia 2019)**
- **Yue Gao***, Yizhi Wang*, Zhouhui Lian, "Attribute2Font: Creating Fonts You Want From Attributes", SIGGRAPH 2020 submitted.
- Dewen Guo, Jie Feng, **Yue Gao**, Bingfeng Zhou, "Masterpiece from Sketch: Master Pieces from Scratch", SIGGRAPH 2020 submitted.
- *Patent:* Zhouhui Lian, **Yue Gao**, Yuan Guo, Yingmin Tang, Jianguo Xiao, "An Automatic Generation Method of Artistic Font Based on One-Stage Few-Shot Learning"

Projects

Attribute2Font: Creating Fonts You Want From Attributes

August 2019 - January 2020

SIGGRAPH 2020 SUBMITTED

- Proposed a novel model, Attribute2Font, to automatically create high-quality fonts according to user-specified attributes.
- Established a mapping relation from descriptive font attributes to the glyph image space for the first time.
- Devised semi-supervised learning scheme and attribute attention module significantly promote the quality of generated glyph images.

Artistic Glyph Image Synthesis via One-Stage Few-Shot Learning

September 2018 - July 2019

ACM TRANSACTIONS ON GRAPHICS (SIGGRAPH ASIA 2019)

Website

- Proposed a simple yet effective model, AGIS-Net, to transfer artistic font style with respect to both shape and texture style within a single stage.
- Introduced a novel and computationally efficient loss function called the local texture refinement loss and boosted the performance by 7%.
- Constructed a new large-scale Chinese glyph image dataset, consisting of 2,460 synthetic artistic font styles and 35 artist-designed font styles.

Deep Learning based Image Captioning

March - June 2018

GRADUATION DESIGN

- Designed and implemented an encoder-decoder framework to generate descriptive text of given image and improved the performance on several metrics by utilizing localization model.
- Developed an easy-to-use demo system using Django and Bootstrap based on Google im2txt model.

Perfect Ticket (Ticket Trading System)

May 2017

OPERATING SYSTEM COURSE PROJECT, **PROJECT MANAGER**

GitHub

- Coordinated group work and obtained a score of 94 as one of the top 5 works among the class.
- Designed and implemented the desktop application using C# with WPF based on producer-consumer problem, and applied 7 core concepts of operation system.

Sensing Earth (IoT Application)

December 2016

EMBEDDING SYSTEM COURSE PROJECT, **PROJECT MANAGER**

GitHub

- Coordinated group work, accomplished the report and got a high score of 95 as one of the top 3 works in class.
- Developed the Android app using Java, collecting and displaying the real-time environmental data and alerting user based on user-specified configurations.

Skills

Tools Git, Visual Studio Code, Xcode

Languages Python, C/C++, Java, HTML, CSS

Frameworks PyTorch, TensorFlow, Numpy

Honors

Graduate **Outstanding Student** of Wangxuan Institute of Computer Technology

2019

Undergraduate The Third Prize Scholarship, 5 times

2014 - 2017

高月

算法工程师

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教育背景

北京大学

硕士 计算机应用技术, GPA: 3.4/4.0

- 王选计算机技术研究所, 计算机视觉, 导师: 肖建国教授
- 主要课程: 算法分析与复杂度理论, 机器学习, 深度学习技术与应用, 模式识别, 智能优化方法及其应用

信息科学技术学院

2018.09 - 2021.06

北京理工大学

本科 物联网工程, GPA: 83.23/100

- English: CET-4 506, CET-6 430

计算机学院

2014.09 - 2018.06

工作经历

Apple

软件开发工程师实习生

- 基于 YOLOv3 使用 PyTorch 开发了检测模型, 将整体检测识别系统的召回率提升了 8%。
- 基于 Mask R-CNN 实现了实例分割模型, 整个检测识别系统的召回率进一步提升了 12%。

2019.12 至今

北京

论文与专利

- Yue Gao*, Yuan Guo*, Zhouhui Lian, Yingmin Tang, Jianguo Xiao, "Artistic Glyph Image Synthesis via One-Stage Few-Shot Learning", ACM Transactions on Graphics (SIGGRAPH Asia 2019)
- Yue Gao*, Yizhi Wang*, Zhouhui Lian, "Attribute2Font: Creating Fonts You Want From Attributes", SIGGRAPH 2020 submitted.
- Dewen Guo, Jie Feng, Yue Gao, Bingfeng Zhou, "Masterpiece from Sketch: Master Pieces from Scratch", SIGGRAPH 2020 submitted.
- 专利: 连宙辉, 高月, 郭远, 唐英敏, 肖建国, "一种基于单阶段少量样本学习的艺术字体自动生成方法"

项目

Attribute2Font: Creating Fonts You Want From Attributes

SIGGRAPH 2020 submitted

- 提出了一个新颖的模型 Attribute2Font, 实现了根据用户指定的属性生成高质量的字体
- 首次建立了一个从描述性字体属性到字形图片空间的映射关系。
- 设计了半监督学习方案和属性注意力机制, 显著地提高了生成的字形图片质量。

2019.08 - 2020.01

Artistic Glyph Image Synthesis via One-Stage Few-Shot Learning

ACM Transactions on Graphics (SIGGRAPH Asia 2019)

- 基于生成对抗网络 (GAN) 提出了一个简单高效的模型, AGIS-Net, 实现了单阶段同时迁移艺术字体的形状和纹理风格。
- 提出了一个新颖的计算高效的损失函数 local texture refinement loss, 将模型的性能提升了 7%。
- 构建了一个新的大规模中文字形图片数据集, 包含 2,460 个合成艺术字体和 35 个设计师设计的艺术字体。

2018.09 - 2019.07

Website

基于深度学习的图像内容描述

本科毕业设计

- 设计并实现了一个编解码器框架, 并利用定位模型改进经典模型并在多个评估指标上达到了效果的提升。
- 利用了 Django 和 Bootstrap 框架并基于 Google 的 im2txt 模型, 开发了一个易用的演示系统。

2018.03 - 06

Perfect Ticket (Ticket Trading System)

操作系统课程设计, 项目组长

- 协调小组工作, 项目得到了 94 分并成为全班最好的五个项目之一。
- 使用了 C# 和 WPF, 基于生产者消费者问题, 应用了操作系统中7个核心概念, 设计并实现了桌面程序。

2017.05

GitHub

Sensing Earth (IoT Application)

嵌入式系统课程设计, 项目组长

- 协调小组工作, 完成了项目报告并且得到了95的高分成为全班最好的三个项目之一。
- 使用 Java 和 Socket 开发了安卓应用程序, 实现了实时收集并展示三种环境数据以及基于配置警报用户。

2016.12

GitHub

技能

工具 Git, Visual Studio Code, Xcode
语言 Python, C/C++, Java, HTML, CSS
框架 PyTorch, TensorFlow, Numpy

荣誉

硕士期间 王选计算机技术研究所优秀学生

2019

本科期间 三等奖学金, 5 次

2014 - 2017