个人信息

姓名
李勇志

出生年月
1996.08.14

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荣誉和获奖

美国数模大赛一等奖

CCF-CSP TOP1. 26%

国家软件设计师认证

武汉大学三好学生

国家励志奖学金

武汉大学甲等奖学金

北京大学硕士奖学金

一项发明专利：

201910007069. X

基本信息

北京大学	数据科学	大数据科学中心	(硕士)	2018-2021
武汉大学	计算机科学与技术	卓越工程师班	(本科)	2014-2018
	GPA: 3.83	**专业排名**: 1/38	**CET-6**: 571	

Blog: http://blog.csdn.net/qq_24369113 **GitHub**: www.github.com/muziyongshixin

实习经历和项目经历

2020.1-2020.2 Google Machine Learning Winter Camp [Link] 【创新项目】

- 在此期间完成了一个能够实现人脸二次元风格化和照片背景风格迁移的应用。其中主要包含 Human Matting，Face style translation 和背景风格迁移等三个模块。能够实现精细化的人物自拍卡通化迁移，同时能将其合成到风格迁移后的背景图中。除此之外还实现了在 Intel-i5 CPU 上视频流中实时人物前景 Matting 和背景迁移。

2018.7 – 2019.7 腾讯北京 CSIG 事业群 医疗 AI 实验室 【实习研究员】

- 实习期间负责智能执医资格考试系统中的核心机器阅读模块的研究和开发，最终模型能在国家执医资格考试中获得 390 分以上的成绩，**超过 70%**的人类考生。
- 研究胸部 X 光片的医疗诊断文本自动生成的相关工作。

2017.10-2018.4 基于 ORB-SLAM2 的移动端 AR 应用 [Link] 【毕设项目】

- 基于 ORB-SLAM2 框架，将其完整移植到了安卓平台，实现了在手机上基于纯视觉的场景定位和地图构建功能，同时在此基础上结合 OpenGL 实现了一个简单的 AR 应用，可以在室内和室外等多种复杂环境下实现稳定的定位和虚拟物体显示，在一台配备骁龙 835 ARM 处理器的小米 6 手机上能够实现 10 fps 的性能。

2016.3-2017.3 移动端数字水印的信息安全保密系统 【国家级创新创业项目】

- 设计并开发了一个基于数字水印的安全保密系统，在用户使用特定 APP 拍照的时候，可以将拍照人个人资料、拍摄物体名称等附加信息利用数字水印技术隐藏在原有的照片里，并发送给后台服务器，服务器能够解析并提取出其中的信息，具有安全性和不可抵赖性。可用于银行的动产监控、校企的签到打卡、防盗版以及侦查取证等众多领域。
- 在该项目中担任概要设计以及后台模块的设计和开发工作。

论文发表 & 技能

1. Visual-Semantic Matching by Exploring High-Order Attention and Distraction[Link] -CVPR,2020.

2. Spectrally-Enforced Global Receptive Field for Contextual Medical Image Segmentation and Classification[Link] -ICME,2020.

3. High-Capacity Convolutional Video Steganography with Temporal Residual Modeling[Link] -ICMR,2019. (Oral)

在审论文:

Efficient Fine-Grained Visual-Text Search Using Adversarially-Learned Binary Co-Embedding -ACM MM,2020

Zero-Shot Video Event Detection with High-Order Semantic Concept Discovery and Matching -ACM MM,2020

Spectral Residual Network: Learning with Non-Local Neural Receptive Fields in CNNs via Spatial-Spectral Transforms -IEEE Transactions on Image Processing

工程技能:

- 熟悉 Python，Java，熟悉 Java web 相关开发，了解 C++。
- 能够熟练使用 Pytorch，了解 TensorFlow 等其他深度学习框架

ABOUT ME

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Yongzhi Li

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1996.08.14

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Honors & Awards

Meritorious Winner In ICM2017

Top 1.26% In CCF-CSP Certification

Certification of National Software Designer

Merit Student Of Wuhan University

National Encouragement Scholarship

First class scholarship in Wuhan University

Master scholarship in Peking University

An invention patent: 201910007069.X

Basic Info

Peking University	Data Science (computer vision)	(master)	2018-2021
Wuhan University	Computer Science and Technology	(bachelor)	2014-2018

GPA: 3.83 **Raking**: 1/38 **CET-6**: 571

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Internships & Projects

2020.1-2020.2 **Google Machine Learning Winter Camp** [Link] **[Project]**

- Completed an application that can transfer the human in a selfie into animation style and change the background at the same time. It mainly includes three modules: Human Matting, Face style translation and Background neural style transfer. It can synthesized the fine-grained animation human face into the style transferred background image to get a cartoonization photo. In addition, completed a program which can achieve real-time character foreground matting and background style transfer in video stream on Intel-i5 CPU.

2018.7 – 2019.7 **Tencent Medical AI Lab** **[Intern Researcher]**

- Responsible for the research and development of the core module in the intelligent medical qualification examination system. The final model can score more than 390 points in the national medical qualification examination, which outperformed more than 70% of the human examinees.
- Researched the automatic generation of medical diagnostic reports for chest X-rays.

2016.8-2016.9 **ORB-SLAM2 Based Android AR Application** [Link] **[Project]**

- Fully ported the ORB-SLAM2 framework to Android platform, and developed an APP which can localization the phone and construct environment map simultaneously based on pure vision. And implemented an AR APP combined with OpenGL, which can be used indoors and outdoors. Stable localization and display of virtual objects can be achieved in a variety of complex environments. Achieved 10 fps performance on a Mi 6 mobile phone with a Snapdragon 835 ARM processor

2016.3-2017.3 **Mobile-side digital watermarking information security system** **[Project]**

- Designed and developed a digital watermarking-based security system. While users are using a specific APP to take pictures, additional information can be hidden in the photo through the digital watermarking technology and then sent to server. The background server can parse and extract the information contained therein. This system can be used in many fields such as current asset surveillance, enterprise sign-in, anti-piracy and investigation.
- Worked as a general designer and backstage system developer, in this project.

Publications & Skills

- Visual-Semantic Matching by Exploring High-Order Attention and Distraction [Link] **-CVPR,2020.**
- Spectrally-Enforced Global Receptive Field for Contextual Medical Image Segmentation and Classification [Link] **-ICME,2020.**
- High-Capacity Convolutional Video Steganography with Temporal Residual Modeling [Link] **-ICMR, 2019. (Oral)**

Under reviewing papers:

- Efficient Fine-Grained Visual-Text Search Using Adversarially-Learned Binary Co-Embedding **-ACM MM,2020**
- Zero-Shot Video Event Detection with High-Order Semantic Concept Discovery and Matching **-ACM MM,2020**
- Spectral Residual Network: Learning with Non-Local Neural Receptive Fields in CNNs via Spatial-Spectral Transforms **-IEEE Transactions on Image Processing**

Engineering Skills:

- Familiar with Python，Java； Proficient in using Pytorch, and familiar with TensorFlow.