

Zhuoqian Yang

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EDUCATION	Carnegie Mellon University , Robotics Institute	Pittsburgh, PA
	▪ M.S. in Computer Vision Cumulative GPA: 4.04/4.3	Aug 2019 – Dec 2020
	Beihang University , School of Software Engineering	Beijing
	▪ B.E. in Software Engineering GPA: 88.1/100, Overall Ranking: 6/149	Sep 2015 – Jun 2019
SELECTED PUBLICATIONS	<p>[1] Zhuoqian Yang*, Wentao Zhu*, Wayne Wu*, Chen Qian, Qiang Zhou, Bolei Zhou, Chen Change Loy, “TransMoMo: Invariance-Driven Unsupervised Video Motion Retargeting,” CVPR 2020. * denotes equal contribution.</p> <p>[2] Zhuoqian Yang, Yang Yang, Kun Yang, Ziquan Wei, “Non-rigid image registration with dynamic Gaussian component density and space curvature preservation,” IEEE Transactions on Image Processing, 28(5), 2584-2598.</p> <p>[3] Zhuoqian Yang, Zengchang Qin, Jing Yu, Yue Hu, “Scene Graph Reasoning with Prior Visual Relationship for Visual Question Answering,” ICIP 2020.</p>	
CAPSTONE PROJECT	Semantic Facial Image Manipulation using 2D/3D Modalities , Sponsored by Fujitsu Supervisor: <i>Dr. Laszlo Jeni, Koichiro Niinuma</i> Ongoing since Feb 2020	
	▪ Building a facial expression manipulation model to generate photorealistic images based on FACS. ▪ Designed a two-stage pipeline to disentangle the expression manipulation process: (i) manipulate image geometry using the 3D reconstruction of the face, (ii) synthesize expression-related facial textures, such as wrinkles.	
EXPERIENCE	SenseTime , Research Intern	Beijing
	TransMoMo: Invariance-Driven Unsupervised Video Motion Retargeting Supervisor: <i>Wayne Wu</i> May 2019 - Nov 2019	
	▪ Designed an autoencoder framework to learn latent representations of human motion from unpaired videos. ▪ Achieved unsupervised representation disentanglement by exploiting invariance properties of three orthogonal factors of variation including motion, structure, and view-angle.	
RESEARCH	Scene Graph Reasoning with Prior Visual Relationship for Visual Question Answering Supervisor: <i>Assoc. Prof. Zengchang Qin</i> Jul 2018 - Dec 2018 Intelligent Computing and Machine Learning Lab, Beihang University Beijing	
	▪ Designed a graph neural network approach to enable agents to reason visual relationships on scene graphs. ▪ Introduced prior knowledge of visual relationships via visual relationship metric learning. A deep semantic space constrained by visual context and language priors is learned for visual relationships.	
	Multi-Temporal Remote Sensing Image Registration Using Deep Convolutional Features Supervisor: <i>Assoc. Prof. Yang Yang</i> Jan 2018 - Apr 2018 Engineering Research Center of GIS Technology in Western China, Yunnan Normal University Kunming	
	▪ Proposed a VGG-pyramid feature based multi-temporal remote sensing image registration method. ▪ Improved RMSE by 20% on remote sensing images with temporal appearance changes.	
	Non-rigid Image Registration with Dynamic Gaussian Component Density and Space Curvature Preservation Supervisor: <i>Assoc. Prof. Yang Yang</i> Mar 2017 - Dec 2017 Engineering Research Center of GIS Technology in Western China, Yunnan Normal University Kunming	
	▪ Designed a dynamic Gaussian component density to progressively exploit available image information and provide sufficient credible correspondences for image registration. ▪ Devised a space curvature preservation to improve the plausibility of estimated transformation.	
COURSES	10-601 Machine Learning - A+, 16-720B Computer Vision - A, 15-462 Computer Graphics - A 16-811 Math Fundation for Robotics - A, 15-463 Computational Photography - Ongoing	