Chen SONG

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WORK EXPERIENCE

MAY 2023 - AUG 2023	Intern - Perception - Critical Object Detection, **Cruise LLC**
	• Designed and implemented multi-view fusion feature for LiDAR-based 3D object detection
	• Achieved consistent improvement across all object classes with up to +2.96 AP in critical categories
	• Deployed the model to autonomous vehicles in various cities including San Francisco and Austin
JUN 2020 - AUG 2020	Research Intern, **Applied Sciences Group, Microsoft Corporation**
	• Designed and implemented an algorithm for 3D object detection from RGB images
	• Applied deep neural network to extract 2.5D features from 2D input
	• Lifted 2.5D features to 3D by minimizing an objective through SVD and the Newton's method
MAR 2019 - MAY 2019	Machine Learning Research Intern, **Borealis AI, Royal Bank of Canada**
	• Disentangled latent representations of flow-based deep generative models
	• Experimented on an image generative model that separates color and shape encoding
JAN 2018 - APR 2018	Software Engineer (Intern), **Arista Networks**
	• Accelerated link aggregation operations on data center switches
	• Revised link aggregation hashing logic to support a new hashing field

EDUCATION

AUG 2019 - AUG 2024	Ph.D., COMPUTER SCIENCE, **University of Texas at Austin**, United States
	• GPA: 3.93/4.00, Supervisor: Dr. Qixing Huang
SEP 2014 - JUN 2019	B.Eng., COMPUTER SCIENCE, **Zhejiang University**, China
	• GPA: 3.93/4.00, Dual Degree Program with Simon Fraser University, Canada

PUBLICATIONS

MAY 2024	**Multi-View Representation is What You Need for Point-Cloud Pre-Training**
	• Siming Yan, Chen Song, Youkang Kong, Qixing Huang
	• The Twelfth International Conference on Learning Representations (**ICLR**) 2024, Vienna, Austria
FEB 2024	**DeblurSR: Event-Based Motion Deblurring Under the Spiking Representation**
	• Chen Song, Chandrajit Bajaj, Qixing Huang
	• The Thirty-Eighth AAAI Conference on Artificial Intelligence (**AAAI**) 2024, Vancouver, Canada
OCT 2023	**Implicit Autoencoder for Point Cloud Self-supervised Representation Learning**
	• Siming Yan, Zhenpei Yang, Haoxiang Li, Chen Song, Li Guan, Hao Kang, Gang Hua, Qixing Huang
	• International Conference on Computer Vision (**ICCV**) 2023, Paris, France
JUN 2023	**TAssembly: Data-driven fractured object assembly using a linear template model**
	• Ziyue Deng, Junfeng Jiang, Zhengming Chen, Wenxi Zhang, Qingqiang Yao, Chen Song, Yifan Sun, Zhenpei Yang, Siming Yan, Qixing Huang, Chandrajit Bajaj
	• Computers & Graphics, Volume 113
JUN 2022	**E-CIR: Event-Enhanced Continuous Intensity Recovery**
	• Chen Song, Qixing Huang, Chandrajit Bajaj
	• Conference on Computer Vision and Pattern Recognition (**CVPR**) 2022, New Orleans, Louisiana
JUN 2020	**HybridPose: 6D Object Pose Estimation under Hybrid Representations**
	• Chen Song, Jiaru Song, Qixing Huang
	• Conference on Computer Vision and Pattern Recognition (**CVPR**) 2020, Seattle, Washington
JUN 2018	**Scalable Distributed Visual Computing for Line-Rate Processing of Video Streams**
	• Chen Song, Jiacheng Chen, Ryan Shea, Andy Sun, Arrvindh Shriraman, Jiangchuan Liu
	• ACM Multimedia Systems (**ACM MMSys**) Conference 2018, Amsterdam, Netherlands