

EDUCATION

- **Rutgers University** New Brunswick, NJ
Master Student in Electric and Computer Engineering; GPA: 3.7 *Sept. 2020 – Present*
- **Central China Normal University** Wuhan, China
B.Eng in Computer Science, Outstanding Graduates; GPA: 3.08 *Sept. 2015 – June 2019*
 Thesis: Wide Residual Network for Image Super-Resolution
- **UC Berkeley** Berkeley, CA
Visiting Student *Jan. 2018 – June 2018*

RESEARCH EXPERIENCE

- **Rutgers Robot Learning Lab** NJ, USA
Advised by Prof. Abdeslam Boularis *Sept 2021 - present*
 - **3D Semantic Segmentation:** Learning Semantic Segmentation from Unlabeled RGB-D Videos of Static Objects by Contrastive Learning over Supervoxel Features
- **Shenzhen Institute of Artificial Intelligence and Robotics for Society** Shenzhen, China
Advised by Prof. Kun Xu *Sept 2020 - Present*
 - **Driving Interactively with Expert Intervention:** Proposed a hierarchical framework using Interactive Imitation Learning for visual-based autonomous driving. The high-level agent is trained with the ground-truth data of the environment, intervenes during the training process of the low-level agent, and provides feedback
 - **Learning Representation for Reinforcement Learning in Autonomous Driving:** Use neural networks as a feature extractor to learn the low-dimensional representation from high-dimensional input to accelerate the reinforcement learning process in autonomous driving. (On-going)
- **Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences** Shenzhen, China
Advised by Prof. Qujiang Lei *May 2019 - Dec 2019*
 - **Reinforcement Learning for Robot Manipulation with Visual Input:** Implement pushing and grasping by combining visual affordance-based manipulation with model-free deep reinforcement learning.
- **Duke Kunshan University, Computer Lab** Suzhou, China
Advised by Prof. David J. Brady *July 2018 - Oct 2018*
 - **Compressive Sensing:** Proposed blind coded down-sampling of pixel data with low-bit-depth-integer masks and show theoretically and experimentally that this process uses 10-20x less power than JPEG compression.
- **CCNU IoT(Internet of Things) Lab** Wuhan, China
Advised by Prof. Huaxiong Yao and Prof. Wei Xie *Oct 2015 - May 2018*
 - **National IoT Competition, National 3rd Price in 2016 and 2017:** Build a sensor network with limited resources, and networks have to be efficient, meanwhile cost less than any other else
 - **Single Image Super-Resolution:** Use smaller kernel and wider network to reduce the number of parameters but get better PSNR and SSIM.

PUBLICATION

Yunfu Deng, Kun Xu, Gengzhao Xiang and Shiyu, Feng. "Accelerate Reinforcement Learning with Representation in Urban Autonomous Driving" Submitted to ICRA 2022

Yunfu Deng, Kun Xu, Gengzhao Xiang and Shiyu, Feng. "Transfer with Intervention: Learning to drive effectively from Simulation"; IEEE Transactions on Intelligent Vehicle, Under Review

Di Lv, **Yunfu Deng**, Zhihao Li, Qujiang Lei, Bo Liang, Jie Xu; Xiuhao Li. "Advanced SURF Features Based Flexible Object Detection" 2019 IEEE International Conference on Robotics and Biomimetics (ROBIO),

PROFESSIONAL SERVICESGRAMMING SKILLS

- **Revier: Languages** IROS 2021: Python, C++, SQL, Matlab **Technologies:** Pytorch, Tensorflow, ROS