Yunfu Deng

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Education

- **University of Wisconsin, Madison** — Madison, WI
  Ph.D Student in Computer Science — *Sept. 2022 – Present*
- **Rutgers University** — New Brunswick, NJ
  M.S in Electric and Computer Engineering — *Sept. 2020 – May 2022*
- **Central China Normal University** — Wuhan, China
  B.Eng. in Computer Science, Honor Degree — *Sept. 2015 – Jun. 2019*

Publication

Shiyang Lu, Abdeslam Boularias,**Yunfu Deng**, Kostas Bekris. *Self-Supervised Learning of Object Segmentation from Unlabeled RGB-D Videos.* **ICRA 2023**
Liam Schramm, **Yunfu Deng**, Edgar Granados, Abdeslam Boularias. *USHER: Unbiased Sampling for Hindsight Experience Replay.* **CoRL 2022**
Yunfu Deng, Kun Xu, Yue Hu, Yunduan Cui, Gengzhao Xiang and Zhongming Pan *Learning Effectively from Intervention for Visual-based Autonomous Driving.* **ITSC 2022**
Di Lv, **Yunfu Deng**, Zhihao Li, Qujiang Lei, Bo Liang, Jie Xu; Xiuhao Li. *Advanced SURF Features Based Flexible Object Detection* **ROBIO 2019**

Research Experience

- **University of Wisconsin, Madison**
  Advised by Prof. Josiah Hanna and Prof. Xiaobin Xiong — *Sept. 2022 - Present*
  - **Residual Learning for Robot Manipulation**: Develop data-efficient learning framework to achieve challenging surface treatment manipulation skill.
  - **Reinforcement Learning for Quadrupedal Locomotion**: Skill learning for quadrupedal robots with passive wheels, achieve high-speed movement with low cost of transportation.
- **Bytedance Research**
  Advised by Dr. Hongtao Wu — *June. 2023 - Sept. 2023*
  - **Learning feedback from human**: Exploring reinforcement learning from human feedback, to complete language-conditioned robot manipulation tasks.
- **Rutgers University**
  Advised by Prof. Abdeslam Boularis — *Sept. 2021 - Aug. 2022*
  - **Unbiased Goal-conditioned Reinforcement Learning**: Proposed USHER: Unbiased Sampling for Hindsight Experience Replay. (CoRL 2022)
  - **3D Semantic Segmentation**: Learning semantic segmentation from unlabeled RGB-D videos of static objects by contrastive learning over super voxel features.(ICRA 2023)
- **Chinese Academy of Science**
  Advised by Prof. Kun Xu — *Sept. 2019 - Sept. 2022*
  - **Driving Interactively with Expert Intervention**: Proposed a hierarchical framework using Interactive Imitation Learning for visual-based autonomous driving. (ITSC 2022)
- **Duke Kunshan University**
  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 showed theoretically and experimentally that this process with 10-20x less power than JPEG compression.

Professional Service

- **Reviewer:** IROS 2021, ICRA 2022, ITSC 2022, ICRA 2023, IROS 2023, ICRA 2024