




Deyao Zhu

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Research Interests

Large Language Model in Decision Making, Robot Learning, Sequential Decision Making, Motion Forecasting, Video Understanding.

Education

King Abdullah University of Science and Technology

PhD, Computer Science

Topic in Reinforcement Learning and Motion Forecasting

Thuwal, Saudi Arabia

01/2020 – Now

Gottfried Wilhelm Leibniz Universität Hannover

MSc, Electrical Engineering and Information Technology

Coursework in Robotics and Machine Learning

Hanover, Germany

10/2016 – 04/2019

Tongji University

BEng, Mechatronics

Coursework in Automation and Control Theory

Shanghai, P.R. China

09/2012 – 09/2016

Publications

1. **Deyao Zhu**, Jun Chen, Kilichbek Haydarov, Xiaoqian Shen, Wenxuan Zhang, Mohamed Elhoseiny. **ChatGPT Asks, BLIP-2 Answers: Automatic Questioning Towards Enriched Visual Descriptions**. *Preprint*
2. **Deyao Zhu**, Yuhui Wang, Jürgen Schmidhuber, Mohamed Elhoseiny. **Guiding Online Reinforcement Learning with Action-Free Offline Pretraining**. *Preprint*
3. **Deyao Zhu**, Li Erran Li, Mohamed Elhoseiny. **Value Memory Graph: A Graph-Structured World Model for Offline Reinforcement Learning**. *International Conference on Learning Representations (ICLR) 2023*
4. Abdualлах Mohamed, **Deyao Zhu**, Warren Vu, Mohamed Elhoseiny, Christian Claudel. **Social-Implicit: Rethinking Trajectory Prediction Evaluation and The Effectiveness of Implicit Maximum Likelihood Estimation**. *European Conference on Computer Vision (ECCV) 2022*
5. Jun Chen, Aniket Agarwal, Sherif Abdelkarim, **Deyao Zhu**, Mohamed Elhoseiny. **RelTransformer: A Transformer-Based Long-Tail Visual Relationship Recognition**. *Conference on Computer Vision and Pattern Recognition (CVPR) 2022*
6. **Deyao Zhu**, Mohamed Zahran, Li Erran Li, Mohamed Elhoseiny. **Motion Forecasting with Unlikelihood Training in Continuous Space**. *Conference on Robot Learning (CoRL) 2021 (oral 6.5%)*
7. **Deyao Zhu**, Mohamed Zahran, Li Erran Li, Mohamed Elhoseiny. **HalentNet: Multimodal Trajectory Forecasting with Hallucinative Intents**. *International Conference on Learning Representations (ICLR) 2021*

8. **Deyao Zhu**, Marco Munderloh, Bodo Rosenhahn, Jörg Stückler. **Learning to Disentangle Latent Physical Factors for Video Prediction**. *German Conference on Pattern Recognition (GCPR) 2019*

Work History

King Abdullah University of Science and Technology <i>Teaching Assistant</i> CS 283 Deep Generative Model & CS 326 Low Resource Deep Learning	Thuwal, Saudi Arabia 01/2021 – Now
Max Planck Institute for Intelligent Systems <i>Master Thesis Student</i> Focused on video prediction and physics scene understanding	Tübingen, Germany 09/2018 – 04/2019
Bosch Center for Artificial Intelligence <i>Internship</i> Focused on policy gradient methods in autonomous driving	Renningen, Germany 03/2018 – 08/2018
Institut für Informationsverarbeitung, Uni Hannover <i>Research Assistant</i> Focused on human pose estimation	Hanover, Germany 06/2017 – 02/2018

Others

Third-place in Habitat Rearrangement Challenge 2022
Reviewer in TPAMI, CoRL 2022, ECCV 2022, AAAI 2023, and CVPR 2023

Skills

Programming: PyTorch, TensorFlow, Python, Matlab, ROS, C++

Languages: English: Fluent German: Basic Hokkien: Native Mandarin: Native