# Deyao Zhu

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## Research Interests

Reinforcement Learning from Human Feedback, Large Language Model, Robot Learning, Sequential Decision Making, Motion Forecasting, Video Understanding.

## Education

**King Abdullah University of Science and Technology** — Thuwal, Saudi Arabia
*PhD*, *Computer Science* — *01/2020 – Now*
Topic in Reinforcement Learning and Motion Forecasting

**Gottfried Wilhelm Leibniz Universität Hannover** — Hanover, Germany
*MSc, Electrical Engineering and Information Technology* — *10/2016 – 04/2019*
Coursework in Robotics and Machine Learning

**Tongji University** — Shanghai, P.R. China
*BEng*, *Mechatronics* — *09/2012 – 09/2016*
Coursework in Automation and Control Theory

## Publications

1. **Deyao Zhu**, Yuhui Wang, Jürgen Schmidhuber, Mohamed Elhoseiny. **Guiding Online Reinforcement Learning with Action-Free Offline Pretraining**. *Preprint*
2. **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*
3. Abduallah 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*
4. 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*
5. **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%)*
6. **Deyao Zhu**, Mohamed Zahran, Li Erran Li, Mohamed Elhoseiny. **HalentNet: Multimodal Trajectory Forecasting with Hallucinative Intents**. *International Conference on Learning Representations (ICLR) 2021*
7. **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** Thuwal, Saudi Arabia
*Teaching Assistant* *01/2021 – Now*
CS 283 Deep Generative Model & CS 326 Low Resource Deep Learning

**Max Planck Institute for Intelligent Systems** Tübingen, Germany
*Master Thesis Student* *09/2018 – 04/2019*
Focused on video prediction and physics scene understanding

**Bosch Center for Artificial Intelligence** Renningen, Germany
*Internship* *03/2018 – 08/2018*
Focused on policy gradient methods in autonomous driving

**Institut für Informationsverarbeitung, Uni Hannover** Hanover, Germany
*Research Assistant* *06/2017 – 02/2018*
Focused on human pose estimation

## 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