Peihao Zhu

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Work Experience

Seed Team, ByteDance — San Jose, CA
Senior Research Scientist — *Sep 2024 - present*

Seed Team, ByteDance — San Jose, CA
Research Scientist — *Jul 2023 - Aug 2024*

Reality Lab, Meta — Burlingame, CA
Research Scientist Intern — *Oct 2022 - Feb 2023*

Creative Vision Lab, Snap — Los Angeles, CA
Research Scientist Intern — *May 2022 - Sep 2022*

Education

King Abdullah University of Science and Technology (KAUST) — Kingdom of Saudi Arabia
PhD in Computer Science — *Dec 2019 - Jun 2023*

King Abdullah University of Science and Technology (KAUST) — Kingdom of Saudi Arabia
Master of Science in Computer Science — *Aug 2017 - Dec 2019*

Institute of Automation, Chinese Academy of Sciences — China
Master candidate in Computer Science — *Sep 2016 - Jul 2017*

Northeastern University — China
Bachelor of Technology in Automation; GPA: 90.0/100; Rank: top 5% — *Aug 2012 - Jun 2016*

Projects

ByteDance Video Generation Foundation Model - Seedance 1.0
ByteDance Seed Team (Dec 2024 - present) [Paper] [Video] [Website]

ByteDance Video Generation Foundation Model - Seaweed
ByteDance Seed Team (Mar 2024 - Nov 2024) [Paper] [Video] [Website]

Tiktok AI-moji
Virtual Avatar Team (Jul 2023 - Dec 2024) [Blog] [Platform]

Publications

Seedance 1.0: Exploring the Boundaries of Video Generation Models
ByteDance Seed
Technical Report, 2025 [Paper] [Webpage]

Seaweed-7B: Cost-Effective Training of Video Generation Foundation Model
ByteDance Seed
Technical Report, 2025 [Paper] [Webpage]

3DAvatarGAN: Bridging Domains for Personalized Editable Avatars
Rameen Abdal, Hsin-Ying Lee, Peihao Zhu, Menglei Chai, Aliaksandr Siarohin, Peter Wonka, Sergey Tulyakov
Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023 [Paper] [Webpage]

HairNet: Hairstyle Transfer with Pose Changes
Peihao Zhu, Rameen Abdal, John Femiani, Peter Wonka
Proc. European Conference on Computer Vision (ECCV), 2022 [Paper] [Webpage]

CLIP2StyleGAN: Unsupervised Extraction of StyleGAN Edit Directions
Rameen Abdal, Peihao Zhu, John Femiani, Niloy Mitra, Peter Wonka
SIGGRAPH Conference Proceedings, 2022 [Paper] [Webpage]

Mind the Gap: Domain Gap Control for Single Shot Domain Adaptation for Generative Adversarial Networks
Peihao Zhu, Rameen Abdal, John Femiani, Peter Wonka
International Conference on Learning Representations (ICLR), 2022 [Paper] [Webpage]

Barbershop: GAN-based Image Compositing using Segmentation Masks
Peihao Zhu, Rameen Abdal, John Femiani, Peter Wonka
ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2021 [Paper] [Webpage]

Improved StyleGAN Embedding: Where are the Good Latents?
Peihao Zhu, Rameen Abdal, Yipeng Qin, John Femiani, Peter Wonka
ArXiv pre-print, 2021 [Paper] [Webpage]

Styleflow: Attribute-conditioned exploration of stylegan-generated images using conditional continuous normalizing flows
Rameen Abdal, Peihao Zhu, Niloy Mitra, Peter Wonka
ACM Transactions on Graphics (TOG), 2021 [Paper] [Webpage]

Labels4Free: Unsupervised Segmentation using StyleGAN
Rameen Abdal, Peihao Zhu, Niloy J. Mitra, Peter Wonka
Proc. IEEE International Conference on Computer Vision (ICCV), 2021 [Paper] [Webpage]

Flow-Guided Video Inpainting with Scene Templates
Dong Lao, Peihao Zhu, Peter Wonka, Ganesh Sundaramoorthi
Proc. IEEE International Conference on Computer Vision (ICCV), 2021 [Paper] [Webpage]

SEAN: Image Synthesis with Semantic Region-Adaptive Normalization
Peihao Zhu, Rameen Abdal, Yipeng Qin, Peter Wonka
*Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR **Oral**), 2020* [Paper] [Webpage]

Large Scale Architecture Asset Extraction from Panoramic Imagery
Peihao Zhu, Wamiq Reyaz Para, Anna Fruehstueck, John Femiani, Peter Wonka
IEEE Transactions on Visualization and Computer Graphics (TVCG), 2020 [Paper] [Webpage]

Award & Achievements

- **KAUST CEMSE Dean's List Award** *2021-2022*
- **National Scholarship** *2013*
- KAUST Fellowship *2017*
- UCAS Scholarship *2016*
- Scholarship for Outstanding Merits *2012-2016*

Scientific Referees

Prof. Peter Wonka
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