

Bryant Shaoheng Fang

📞 512-549-0772 ✉ bshfang@utexas.edu 🌐 bshfang.github.io

Education

University of Texas at Austin <i>Ph.D. in Computer Science - Advisor: Prof. Qixing Huang - NSF Graduate Research Fellow</i>	Aug. 2025 - Present Texas, U.S.
University of Texas at Austin <i>M.S. in Computer Science - GPA 3.87/4.0</i>	Aug. 2023 - May. 2025 Texas, U.S.
Shanghai Jiao Tong University <i>B.Eng. in Computer Science and Technology - IEEE honored class - Major GPA 3.81/4.0</i>	Sep. 2018 - Aug. 2022 Shanghai, China

Research Interests

World Models and Video Generation: interactive and auto-regressive video world models, persistent world generation, 4D video generation with consistent geometry and motion.

Agent Systems for Visual Generation: agentic frameworks that plan, generate and refine visual content with generative models, from video world models to 3D scenes.

Research and Industry Experience

Roblox <i>Research Intern Video Generation Model</i> Building video generation models for Roblox Reality, exploring multiplayer and self-improving video editing.	Oct. 2026 - Present San Mateo, U.S.
University of Texas at Austin <i>Graduate Researcher Advised by Prof. Qixing Huang and Prof. Georgios Pavlakos</i>	Aug. 2023 - Present Texas, U.S.
Adobe Research <i>Research Intern Agentic Video World Models, Auto-regressive Video Generation</i> Developed AgiWorld, an agentic video world model that builds and maintains persistent worlds through interactive, auto-regressive video generation with an agent system. (in submission).	May. 2026 - Aug. 2026 California, U.S.
SGP Group, University College London Advised by Prof. Niloy Mitra <i>Visiting Researcher 4D Video Generation</i> Developed WorldReel, a unified 4D video generation framework that jointly produces RGB frames, per-frame geometry, camera poses and dense motion with consistent geometry and motion (CVPR 2026).	May. 2025 - Aug. 2025 London, U.K.
DAMO Academy, Alibaba Group <i>Research Intern 3D Scene Generation with Multi-View Diffusion</i>	May. 2024 - Feb. 2025 California, U.S.
Cooperative Medianet Innovation Center, SJTU Advised by Prof. Siheng Chen <i>Research Assistant Perception and Prediction for Autonomous Driving</i>	Feb. 2021 - Jul. 2023 Shanghai, China

Awards

NSF Graduate Research Fellowship (Field: Artificial Intelligence)	2025
UT College of Natural Science Dean's Prestigious Fellowship	2025

Publications

* *Equal contribution*

- **World Models and Video Generation**

Fang, S., Mei, Y., Jiang, H., Sun, X., Zheng, H., Tan, H., Pavlakos, G., Huang, Q. and Hu, Y., AgiWorld: An Agentic Video World Model for Building Persistent Worlds. *In submission*

Fang, S., Jiang, H., Bai, Y., Mitra, N. J. and Huang, Q., WorldReel: 4D Video Generation with Consistent Geometry and Motion Modeling. *CVPR 2026*

Bai, Y., **Fang, S.**, Yu, C., Wang, F. and Huang, Q., GeoVideo: Introducing Geometric Regularization into Video Generation Model. *NeurIPS 2025*

- **3D Scene Generation**

Fang, S., Yu, C., Wang, F. and Huang, Q., MVRoom: Indoor Scene Generation with Multi-View Diffusion Models, *ArXiv 2025*

Fang, S., Yang, H., Mooney, R. and Huang, Q., Text-Guided Interactive Scene Synthesis with Scene Prior Guidance, *Eurographics 2025*

- **Perception and Prediction for Autonomous Driving**

Fang, S., Liu, Z., Wang, M., Zhong, Y., Xu, C. and Chen, S., Self-supervised Bird's Eye View Motion Prediction with Cross-Modality Signals, *AAAI 2024*

Fang, S.*, Ye, R.* , Wang, W., Liu, Z. and Chen, S., FedRSU: Federated Learning on Roadside Units, *IEEE Transactions on Intelligent Transportation Systems 2024*

Fang, S.*, Wang, Z.* , Zhong, Y., Ge, J. and Chen, S., TBP-Former: Learning Temporal Bird's-Eye-View Pyramid for Joint Perception and Prediction in Vision-Centric Autonomous Driving, *CVPR 2023*

Hu, Y., **Fang, S.**, Xie, W. and Chen, S., Aerial monocular 3d object detection, *RAL 2023*

Hu, Y., **Fang, S.**, Lei, Z., Zhong, Y., Chen, S. Where2comm: Communication-efficient collaborative perception via spatial confidence maps. *NeurIPS 2022 spotlight*

- **AI for Science**

Wang, R., **Fang, S.**, Huang, Q. and Liu, Y., Constant-Potential Machine Learning Force Field for Electrochemical Interface. *NeurIPS AI4Science Workshop 2025 & Journal of Chemical Theory and Computation*