

Kefan (Arthur) Chen

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ABOUT ME

I'm finishing my PhD in AI/CV at Brown University and looking for a full-time AI research scientist position. My expertise encompasses GenAI, 3D vision, digital humans, hand modeling, and multimodal learning. I have 5 years of full-time employment at Google Research, Pinterest, Gatik, and Meta as AI researcher, machine learning engineer, and startup founding engineer. I also interned at Waymo, Meta, and NVIDIA along my academic journey.

EDUCATION

- **Brown University** 2022 - 2026
Ph.D. in Computer Science Providence, RI
 - Advisor: [Srinath Sridhar](#)
 - Research expertise: Generative AI, 3D Vision, Hand Modeling, Human Avatar, Multimodal Learning.
- **University of Toronto** 2014 - 2018
Bachelor in Electrical Engineering Toronto, Canada
 - Courseworks: Probability Theory (A), Design/Analysis of Algorithms (A), Inference Algorithm and ML (A).
 - Dean's Honor List.

EXPERIENCE

- **Waymo (Google Robotaxi)** Jun 2025 - Aug 2025
Research Intern Mountain View, CA
 - Research robust multimodal perception models against missing modalities in case of camera or LiDAR malfunction.
 - Develop a generative multimodal BEV model using diffusion that can impute missing modality.
- **Meta AI** Jun 2024 - Mar 2025
Researcher (contract) Burlingame, CA
 - Research photorealistic 3D avatar modeling using Gaussian Splatting for digital humans and VR/XR applications.
 - Develop the first pioneering model to capture dynamic hand-face interaction in human avatars using a mesh-rigged Gaussian representation, achieving state-of-the-art realism.
 - Publish first-author and co-author papers at top AI conferences, including ICCV and CVPR.
- **Meta Reality Labs** Jun 2023 - Dec 2023
Research Scientist Intern Redwood, WA
 - Research 2D/3D diffusion and generative foundation models for image, video, and 3D synthesis.
 - Develop the first large generative foundation model for hand image, video, and novel view synthesis, achieving state-of-the-art generalization and zero-shot abilities.
 - Publish a first-author paper at CVPR and receive recognition as Highlight (top 2.98%).
- **Pinterest** Jan 2022 - Sep 2022
Machine Learning Engineer (full-time) Toronto, Canada
 - Develop ML models to scale metadata extraction for shopping content data mining.
- **Gatik** Sep 2020 - Dec 2021
Founding Engineering Staff (full-time) Toronto, Canada
 - Lead research and development of long-range perception and multimodal sensor fusion for autonomous trucking.
 - Coordinate and manage long-term research collaboration with universities and academic labs.
 - Build the engineering team for AI perception development and develop a technical recruiting pipeline.
- **Google Research** Jun 2018 - Aug 2020
AI Resident (contract) New York, NY
 - Research 3D computer vision, camera pose estimation, and SO(3) representation learning.
 - Develop a spherical distribution regression model for wide-baseline camera pose estimation, achieving 50% error reduction compared with prior methods.
 - Propose a 9D-SVD representation for 3D rotation regression, improving various fundamental problems in robotics and computer vision, including point cloud alignment, pose estimation, inverse kinematics, and depth prediction.
 - Publish first-author and co-author papers at top AI conferences, including CVPR and NeurIPS.
- **NVIDIA** May 2017 - Aug 2017
Deep Learning Intern Toronto, Canada
 - Develop a domain randomization model to bridge the domain gap between simulation and the real world.
 - Demonstrated the state-of-the-art game robot demo at Industry Expo of ACM SIGGRAPH 2017. ([News](#))

PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

- [C.1] **Kefan Chen**, Sergiu Oprea, Justin Theiss, Sreyas Mohan, Srinath Sridhar, Aayush Prakash. **InteractAvatar: Modeling Hand-Face Interaction in Photorealistic Avatars with Deformable Gaussians**. In *International Conference on Computer Vision (ICCV)*, 2025.
- [C.2] **Kefan Chen**, Chaerin Min, Linguang Zhang, Shreyas Hampali, Cem Keskin, Srinath Sridhar. **FoundHand: Large-Scale Domain-Specific Learning for Controllable Hand Image Generation**. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025. **(Highlight, top 2.98% of submissions.)**
- [C.3] Aashish Rai, Dilin Wang, Mihir Jain, Nikolaos Sarafianos, **Kefan Chen**, Srinath Sridhar, Aayush Prakash. **UVGS: Reimagining Unstructured 3D Gaussian Splatting using UV Mapping**. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025.
- [C.4] Chandradeep Pokhariya, Ishaan N Shah, Angela Xing, Zekun Li, **Kefan Chen**, Avinash Sharma, Srinath Sridhar. **MANUS: Markerless Grasp Capture using Articulated 3D Gaussians**. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.
- [C.5] Cheng-You Lu, Peisen Zhou, Angela Xing, Chandradeep Pokhariya, Arnab Dey, Ishaan Shah, Rugved Mavidipalli, Dylan Hu, Andrew Comport, **Kefan Chen**, Srinath Sridhar. **DiVa-360: The Dynamic Visual Dataset for Immersive Neural Fields**. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024. **(Highlight, top 2.81% of submissions.)**
- [C.6] **Kefan Chen**, Noah Snavely, Ameesh Makadia. **Wide-Baseline Relative Camera Pose Estimation with Directional Learning**. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021.
- [C.7] Jake Levinson, Carlos Esteves, **Kefan Chen**, Noah Snavely, Angjoo Kanazawa, Afshin Rostamizadeh, Ameesh Makadia. **An Analysis of SVD for Deep Rotation Estimation**. In *Conference on Neural Information Processing Systems (NeurIPS)*, 2020.
- [J.1] C Wang, F Fan, R Sabatini, O Voznyy, K Bicanic, X Li, D Sellan, M Saravanapavanantham, N Hossain, **K Chen**, S Hoogland, E Sargent. **Quantum Dot Color-Converting Solids Operating Efficiently in the kW/cm² Regime**. *Chemistry of Materials*, Vol. 29, Issue 12, pp. 5104-5112, 2017.

SKILLS

- **Programming Languages:** Python, C++, C, Pytorch, Tensorflow, JAX.
- **Research:** Diffusion, Gaussian Splatting, multimodal representation learning, pose estimation, 3D reconstruction.

ACADEMIC SERVICES

- Outstanding Reviewer award at CVPR2025.
- Serve as reviewer for top AI/ML conferences, including NeurIPS, ICML, CVPR, ICCV, ECCV, IROS.
- Mentor MS and undergrad students to publish research works at top-tier AI conferences.