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*, Providence, RI
  Ph.D. in Computer Science
  ◦ Advisor: Srinath Sridhar
  ◦ Research expertise: Generative AI, 3D Vision, Hand Modeling, Human Avatar, Multimodal Learning.

- **University of Toronto** — *2014 - 2018*, Toronto, Canada
  Bachelor in Electrical Engineering
  ◦ Dean's Honor List.

SKILLS

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

EXPERIENCE

- **Waymo (Google Robotaxi)** — *Jun 2025 - Aug 2025*, Mountain View, CA
  Research Intern
  ◦ 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*, Burlingame, CA
  Researcher (contract)
  ◦ Research photorealistic 3D avatars using Gaussian Splatting for digital humans and VR/XR applications.
  ◦ Develop a novel model to capture dynamic hand-face interaction, improving the realism of telepresence.
  ◦ Publish first-author and co-author papers at top AI conferences, including ICCV and CVPR.

- **Meta Reality Labs** — *Jun 2023 - Dec 2023*, Redwood, WA
  Research Scientist Intern
  ◦ Research 2D/3D diffusion and generative foundation models for image, video, and 3D synthesis.
  ◦ Develop a state-of-the-art foundation model for 2D/3D hand image, video, and hand-object interaction synthesis.
  ◦ Publish a first-author paper at CVPR and receive recognition as Highlight (top 2.98%).

- **Pinterest** — *Jan 2022 - Sep 2022*, Toronto, Canada
  Machine Learning Engineer (full-time)
  ◦ Develop ML models to scale metadata extraction for shopping content data mining.

- **Gatik** — *Sep 2020 - Dec 2021*, Toronto, Canada
  Founding Engineering Staff (full-time)
  ◦ 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*, New York, NY
  AI Resident (contract)
  ◦ Research 3D computer vision, camera pose estimation, and SO(3) representation learning.
  ◦ Publish first-author and co-author papers at top AI conferences, including CVPR and NeurIPS.
  ◦ Design and implement various large-scale distributed model training and data pipelines in Tensorflow.
  ◦ Contribute to the engineering infrastructure for 3D vision and graphics in Tensorflow.

- **NVIDIA** — *May 2017 - Aug 2017*, Toronto, Canada
  Deep Learning Intern
  ◦ Develop domain randomization model to transfer robotic learning from simulation to the real world and demonstrated at ACM SIGGRAPH 2017. (News)

[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.

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.