

Office:
3800 E Stevens Way NE, Room
284, Seattle, WA 98195

Jingwei Ma
Website: jingweim.github.io

Mobile & Email:
+1-206-765-9391
jingweim@cs.washington.edu

EDUCATION

University of Washington

Ph.D. in Computer Science and Engineering

Advisors: Steve Seitz, Ira Kemelmacher-Shlizerman, Brian Curless

Seattle, WA
Sep 2021 – Present

Massachusetts Institute of Technology (MIT)

M.Eng in Electrical Engineering and Computer Science

BS in Electrical Engineering and Computer Science

Advisors: Antonio Torralba, Phillip Isola

Cambridge, MA
Jun 2020 – May 2021
Sep 2016 – May 2020

PUBLICATIONS

Jingwei Ma, Vivek Jayaram, Brian Curless, Ira Kemelmacher-Shlizerman, Steve Seitz. “UltraZoom: Generating Gigapixel Images from Regular Photos”, SIGGRAPH Asia 2025. [\[Link\]](#) [\[Arxiv\]](#)

Jingwei Ma, Erika Lu, Roni Paiss, Shiran Zada, Aleksander Holynski, Tali Dekel, Brian Curless, Michael Rubinstein, Forrester Cole. “VidPanos: Generative Panoramic Videos from Casual Panning Videos”, SIGGRAPH Asia 2024. [\[Link\]](#) [\[Arxiv\]](#)

Jingwei Ma, Lucy Chai, Minyoung Huh, Tongzhou Wang, Ser-Nam Lim, Phillip Isola, Antonio Torralba. "Totems: Physical Objects for Verifying Visual Integrity", ECCV 2022. [\[Link\]](#) [\[Arxiv\]](#)

OTHER PUBLICATIONS

Sage Simhon, **Jingwei Ma**, Prafull Sharma, Lucy Chai, Yen-Chen Lin, Phillip Isola. “Neural Refraction Fields for Image Verification”, under review at NeurIPS 2026.

Renjie Zhao, **Jingwei Ma**, Huy Huynh, Brian Curless, Steven M. Seitz, Ira Kemelmacher-Shlizerman. “GarmentZoom: Generating Zoomable Images from Garment Listings”, ECCV 2026 RetailVision Workshop. [\[Link\]](#) [\[Arxiv\]](#)

Huy Huynh, **Jingwei Ma**, Brian Curless, Ira Kemelmacher-Shlizerman, Steven M. Seitz. “MicroZoom: Structure-Preserving Detail Synthesis at Extreme Scale”, arXiv preprint, 2026. [\[Link\]](#) [\[Arxiv\]](#)

Xia Su, Ruiqi Chen, Benlin Liu, **Jingwei Ma**, Zonglin Di, Ranjay Krishna, Jon Froehlich. “CapNav: Benchmarking Vision Language Models on Capability-conditioned Indoor Navigation”, arXiv preprint, 2026. [\[Link\]](#) [\[Arxiv\]](#)

Xia Su, Ruiqi Chen, **Jingwei Ma**, Chu Li, Jon E. Froehlich. “FlyMeThrough: Human-AI Collaborative 3D Indoor Mapping with Commodity Drones”, UIST 2025. [\[Arxiv\]](#)

Xia Su, Ruiqi Chen, Richard (Weiye) Zhang, **Jingwei Ma**, Jon E. Froehlich. “A Demo of DIAM: Drone-based Indoor Accessibility Mapping”, UIST 2024 (Demo). [[Link](#)]

EMPLOYMENT

Human-Garment Interaction Video Generation

Seattle, WA

Student Researcher (w/ Yasamin Jafarian, Andreas Lugmayr, Google)

Jun 2026 – Present

- Fine-tuned Wan2.2 A14B for complex human–garment interaction (e.g., zipping, shirt tucking), improving physical plausibility of fine-grained manipulation and garment state transition.
- Collected a hybrid interaction-dense video dataset. Synthetic: generated from Omni with auto prompt-tuning and QA. Real: curated from web, extracted interaction-dense clips and captioned.
- Designing an evaluation protocol against baselines (e.g. iTryOn and Gemini-Omni) using VLM and human evaluation, with physics-focused metrics

VidPanos: Generative Panoramic Videos from Casual Panning Videos

Seattle, WA

Student Researcher (w/ Erika Lu, Forrester Cole, Google)

Jun 2023 – May 2024

- Built a pipeline on top of different video generation models to complete partial video panoramas
- Discovered and addressed limitations of the generative model for the task of video completion
- Paper published in SIGGRAPH Asia 2024 [[Link](#)]

The Campanile Movie Revisited with Radiance Fields [[Video](#)][[Article](#)]

Los Angeles, CA

Applied Research Intern (w/ Paul Debevec, Netflix)

Jun 2022 – Sept 2022

- Reconstructed drone captures using SOTA methods (Instant-NGP, Plenoxels, Mip-NeRF 360)
- Computed camera trajectory from the 1997 Campanile Movie and mapped it onto the radiance field reconstructed from the 2022 drone captures for re-rendering
- Wrote an internal report comparing the radiance field methods, also against traditional methods

Totems: Physical Objects for Verifying Visual Integrity

Cambridge, MA

Student Researcher (w/ Prof. Antonio Torralba and Prof. Phillip Isola, MIT)

Jun 2020 – Nov 2021

- Used refractive objects (*Totems*) as cryptography one-way functions for image forensics purposes
- Reconstructed scene radiance field from limited and distorted totem views with unknown poses
- Implemented a detection pipeline to compute manipulation heatmaps for totem-protected images
- Paper published in ECCV 2022. [[Link](#)]

RealVirtualhome: Neural Rendering for Indoor Simulator

Cambridge, MA

Student Researcher (w/ Prof. Antonio Torralba, MIT)

Jun 2019 – May 2020

- Trained Image-to-Image GANs to generate realistic images from simulator metadata.
- Worked with many datasets (ADE20K, LSUN) and models (openpose, MegaDepth, Uppernet).
- Improved generation realness by generating more object details.

Transfer Learning for Threat Detection at Security Checkpoints

Sunnyvale, CA

Computer Vision Intern (w/ Synapse Technology)

Jan 2019

- Studied SOTA work in Transfer Learning and proposed 5 potential solutions within a week.
- Implemented the domain classifier approach and ran experiments.

Multi-Person Pose and Gesture Recognition for Autonomous Driving

Santa Clara, CA

Applied Research Intern (w/ Team DriveIX, NVIDIA)

May 2018 – Aug 2018

- Trained models in keras and tensorflow. Did model pruning and optimization with TensorRT.

- Worked with public datasets (Human3.6M, COCO) and wrote scripts for making custom datasets.
- Built a multi-threading pipeline to compute 2d, 3d pose, gesture, tracking real-time with 1 GPU.

Vidmap: 3D Scene Reconstruction for Movies

Cambridge, MA

Student Researcher (w/ Prof. Antonio Torralba, MIT)

Sep 2017 – May 2019

- Used segmentation and masking to isolate rigid components for reconstruction.
- Labeled and clustered scenes by aligning scripts and subtitles of movies.

PROJECTS, AWARDS, AND HONORS

HackMIT - OpenChoreo: Learning How to Dance from any Dance Video

Fall 2019

- Awarded Top 10 and “Best Augmented Reality”, sponsored by Niantic, Inc.
- Designed a human-pose matching algorithm using joint angles.

HackMIT - Music for All: World’s Most Affordable Piano

Fall 2018

- Won “Best Impossible Hack”, sponsored by Pear VC.
- Made a piano using cardboard and detected piano keys from laptop webcam frames.

Pitch Competition - 3D Object Generation w/ AlphaZero-inspired MCTS and Octrees

Winter 2017

- Won Best Google award.

HackMIT - MIT Sorting Hat: Sort People into MIT Dorms

Fall 2017

- Awarded Top 10 and “Best Internet of Things”, sponsored by Samsara.
- Created an original dataset. Used bag of words and semantic distance to calculate matching.

Startup project - Lambda Tea: Self-serve Boba Dispenser

Fall 2017

- Cofounder. Project got into MIT sandbox 2017 and Y Combinator winter 2018.

Hack at Brown - Vox.io: Control Computers with Voice from anywhere

Spring 2016

- Runner-up for Best Microsoft Prize.
- Implemented a language understanding model to match voice commands to computer commands.

OTHER

Skills: Python, PyTorch, Linux, Unity, Blender, Tensorflow, C++, Matlab, Java, JavaScript, Arduino

Activities: Pistol Team, Student Government, EECS Undergraduate Research Conference co-organizer