Huong Ngo

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Education

University of Washington, Seattle   **Seattle, WA**
Applied Computational Mathematical Sciences: Data Science & Statistics B.Sc. 3.71 GPA   Sep 2020–Aug 2024

Publications

OLMoASR: Open Models and Data for Training Robust Speech Recognition Models
Huong Ngo, Matt Deitke, Martijn Bartelds, Sarah Pratt, Josh Gardner, Matt Jordan, Ludwig Schmidt

Molmo and PixMo: Open Weights and Open Data for State-of-the-Art Multimodal Models   **CVPR 2025**
Matt Deitke, Christopher Clark, Sangho Lee, ..., Huong Ngo, et al. (90 citations)

Objaverse-XL: A Universe of 10M+ 3D Objects   **NeurIPS 2023**
Matt Deitke, Ruoshi Liu, Matthew Wallingford, Huong Ngo, et al. (685 citations)

Work Experiences

Vercept   **Seattle, WA**
Member of Technical Staff   Jun 2025–Present
- Led data curation research for computer-use agents (planner + grounding VLM); built pipeline processing 414K+ images and 2.28M labels to address distribution shift; improved GUI grounding by up to 17% and agent task success by up to 18%
- Improved grounding VLM on external benchmarks through large-scale label enrichment and test-time compute scaling; achieved 20+ point gains on ScreenSpot-Pro (52%→72%) and 2+ points on ScreenSpotV2 (92%→94%)
- Designed planner data collection system to collect 5K+ trajectories (1.2K+ annotation hours) for training computer-use agents across 14 task categories; built annotation infrastructure with AWS SQS and deduplication
- Architected agent evaluation framework (14 categories) with programmatic verification; analyzed failure modes across planner and grounding models to prioritize data collection efforts

Allen Institute for AI   **Seattle, WA**
Pre-Doctoral Researcher   Aug 2024–Jun 2025
- Led OLMoASR, the first fully open reproduction of OpenAI's Whisper; designed and implemented large-scale data curation pipeline to filter 3M hours of web-scraped audio down to 1M-hour high-quality training set
- Developed data quality filters (text heuristics, language alignment, fuzzy deduplication) and ran controlled experiments analyzing performance on downstream tasks; isolated filter contributions (up to 16.5% improvement) to guide data curation decisions
- Built multi-node distributed training infrastructure scaling from 39M to 1.5B parameters using PyTorch DDP/FSDP; debugged distributed training stability issues across multi-node GPU clusters with PyTorch Profiler
- Trained models competitive with Whisper across all scales on 21 benchmarks; released models on HuggingFace with 470+ GitHub stars

Allen Institute for AI   **Seattle, WA**
Research Intern   Oct 2023–Dec 2023
- Conducted video representation learning research on PRIOR Team
- Worked on data curation for autoregressive next frame prediction by designing heuristics-based and model-based video filtering with CLIP, data collection pipeline with AWS MTurk, and evaluation pipeline

University of Washington, Allen Center for Computer Science and Engineering   **Seattle, WA**
Deep Learning Research Assistant, Supervisor: Matt Deitke   Mar 2023–Aug 2024
- Conducted data-centric machine learning and multimodal research in the Reasoning, AI, Vision Lab (RAIVN)
- Worked on Objaverse-XL by constructing large-scale data processing pipelines using CLIP to annotate 120M 3D objects
- Initiated OLMoASR; built data preprocessing pipeline to segment audio-transcript pairs into WebDataset format; ran SLURM job arrays to process 70K+ shards across compute cluster
- Developed distributed training infrastructure with PyTorch DDP; debugged multi-GPU synchronization issues (hanging, deadlocks) and optimized multi-GPU training throughput with PyTorch Profiler

Teaching Experiences

Machine Learning and Database Teaching Assistant   **Seattle, WA**
Paul G. Allen Center for Computer Science and Engineering   Sep 2022–June 2023
Statistics Tutor   **Seattle, WA**
University of Washington, Department of Statistics   Sept 2021–June 2022

Reviewing

CVPR 2026 – Conference on Computer Vision and Pattern Recognition
ICML 2026 – International Conference on Machine Learning

Skills

Languages: Python, SQL, R, Java
Technologies: PyTorch, NumPy, pandas, matplotlib, PyTorch Lightning, Weights and Biases, AWS SQS, AWS MTurk, webdataset, HuggingFace, ffmpeg, vllm, Ray, SparkSQL, BeautifulSoup, scikit-learn, PySpark,
Developer Tools: Jupyter, GitHub/Git, Slurm

Relevant Coursework

University of Washington, Seattle   **Seattle, WA**
Data-Centric Machine Learning, Machine Learning Systems, Machine Learning for Big Data, Machine Learning, Artificial Intelligence, Databases, Data Structures & Algorithms, Linear Algebra, Statistics & Probability

References

Ludwig Schmidt
Assistant Professor of Computer Science at Stanford University
Member of Technical Staff at Anthropic
Best paper awards at ICML and NeurIPS; led LAION-5B, OpenCLIP, and DataComp

Matt Deitke
AI Researcher at Meta Superintelligence Lab (MSL)
Co-Founder of Vercept
Outstanding Paper at NeurIPS 2022 (ProcTHOR); Best Paper Honorable Mention at CVPR 2025 (Molmo)

Kiana Ehsani
CEO and Co-Founder at Vercept
Previously led Embodied AI team at Allen Institute for AI
Core contributor to AI2-THOR; 31 publications in embodied AI and visual reasoning

Ross Girshick
Co-Founder at Vercept
Previously Research Scientist at Meta AI (FAIR)
Creator of SAM, R-CNN, Faster R-CNN, Mask R-CNN; 18th most cited researcher in science (660K+ citations)