ERIC SLYMAN

Human-centered GenAI R&D on reliability, calibration, safety, and model evaluation

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EDUCATION

Ph.D., Artificial Intelligence & Computer Science – Oregon State University — Sep. 2021 - June 2025
Norman & Evelyn Wildish Distinguished Graduate Fellow [0.13% invitation rate] — *GPA: 4.00/4.00*
Outstanding Scholars Program [6% invitation rate]
Committee: **Stefan Lee**, Minsuk Kahng, Sandhya Saisubramanian, Weng-Keen Wong, Yelda Turkan

B.S./M.S., Computer Science – Western Washington University — Sep. 2015 - Dec. 2020
Accelerated Master's Fast Track Program — *GPA: 3.78 (BS), 4.00 (MS)/4.00*
Graduated with top honors, Magna Cum Laude (≥97th percentile in class)

EXPERIENCE

ML Engineer / Researcher, Applied Science & Machine Learning (Firefly) — Jan. 2025 - Present
Manager: Oliver Brdiczka — *Adobe*

- Co-launched next-generation Firefly image generation and editing models across product surfaces.
- Built safety, reliability, and user-intent alignment metrics/pipelines for generative imaging and video at scale.
- Conducted large-scale DiT (Diffusion Transformer) experimentation on 100+ nodes (800+ GPUs) including distributed training, led RLHF/SFT post-training, and optimized user prompt rewrites with GEPA-tuned VLMs.
- Developed system for integrating novel continuous modalities into pretrained MLLMs without forgetting (NDA). [P1]

Graduate Researcher — Sep. 2021 - Jan. 2025
Advisers: Stefan Lee, Minsuk Kahng (previous co-advisor) — *Oregon State University*

- Built VLSlice interactive bias-discovery dashboards; multi-org study (OSU/Adobe/Google/PNNL); public release. [C4]
- Studied environmental adversarial attacks on VLN agents; demonstrated targeted trajectory hijacking. [C2]
- Audited LLM.int8, QLoRA, and dynamic 8-bit; found sizable yet inconsistent subgroup-fairness shifts across tasks. [W1]

Research Intern, Media Intelligence Lab — Jun.-Dec. 2022, 2023, 2024
Advisers: Kushal Kafle, Scott Cohen, Zoya Bylinskii — *Adobe*

- Calibrated MMB judge (image-aware Bayesian prompt ensembles): **-43%** Max ECE, **+1-2%** AUC on HPSv2. [C1, P2]
- Proposed FairDeDup for LAION-scale data deduplication; reduced MinSkew/Disparity and preserved accuracy. [C3, P3]
- Built VALET to rapidly compose reusable ViL behavioral tests (templates, counterfactuals, slices) for regression. [W2]

Post-Master's Research Associate — Jan. 2021 - Sep. 2021
Advisers: Karl Pazdernik, Tim Doster — *Pacific Northwest National Laboratory*

- Probed robust audiovisual fusion for person verification under noise/occlusion; improved reliability. [A1]
- Built PyTorch3D differentiable rendering pipeline to surface natural adversarial examples in remote sensing. [W3]
- Served as a PNNL STEM Ambassador, delivering public science outreach and demonstrations.

Graduate Research Assistant — Dec. 2017 - Dec. 2020
Adviser: Brian Hutchinson — *Western Washington University*

- Built fine-grained classroom-activity detectors on 60+ audiovisual hours; reduced error by **35-55%**. [W5]
- Developed spatiotemporal GANs for Earth-system model emulation in climate simulation-focused tasks. [W4, W6]

AI Marketing Engineer Intern — June 2020 - Sep. 2020
Supervisor: Siddharth Sharma — *NVIDIA*

- Owned technical marketing research for Jarvis ConvAI, informing positioning and launch collateral.
- Analyzed SOTA ConvAI models hands-on to identify strengths, weaknesses, and readiness gaps.
- Surveyed 100+ NLU/NLP, ASR, and TTS papers; synthesized findings for product and PM stakeholders.

Research Intern, National Security Internship Program (NSIP) — July 2019 - Sep. 2019
Adviser: Andrew Avila — *Pacific Northwest National Laboratory*

PAPERS & PATENTS

[C1] **E. Slyman**, R. Li, K. Kafle, S. Lee. *"Calibrating MLLM-as-a-judge via Multimodal Bayesian Prompt Ensembles.,"* Computer Vision and Pattern Recognition (ICCV), 2025. [ericslyman.com/mmb-judge]

[C2] Z. Yang, X. Shi, **E. Slyman**, S. Lee. *"Hijacking VLN Agents with Adversarial Environmental Attacks.,"* Winter Conference on Applications in Computer Vision (WACV), 2025. https://arxiv.org/abs/2412.02795

[C3] **E. Slyman**, S. Lee, S. Cohen, and K. Kafle. *"FairDeDup: Detecting and Mitigating Vision-Language Fairness Disparities in Semantic Dataset Deduplication,"* Computer Vision and Pattern Recognition (CVPR), 2024. [ericslyman.com/fairdedup] *Also presented at the workshop on What is Next in Multi-Modal Foundation Models? (MMFM @ CVPR)*

[C4] **E. Slyman**, M. Kahng, and S. Lee. *"VLSlice: Interactive Vision-and-Language Slice Discovery,"* International Conference on Computer Vision (ICCV), 2023. [ericslyman.com/vlslice]

[W1] **E. Slyman**, A. Kanneganti, S. Hong, S. Lee. *"You Never Know: Quantization Induces Inconsistent Biases in Vision-Language Foundation Models,"* NeurIPS workshop on Responsibly Building the Next Generation of Multimodal Foundation Models (RBFM), 2024. https://arxiv.org/abs/2410.20265

[W2] **E. Slyman**, K. Kafle, and S. Cohen. *"VALET: Vision-And-LanguagE Testing with Reusable Components,"* NeurIPS Queer in AI Workshop (QAI), 2023. Extended Abstract. [ericslyman.com/assets/pdf/valet.pdf]

[W3] T. Nowak, **E. Slyman**. *"AdvPose: Generating Realistic Adversarial Scenes Through Object Pose Manipulation,"* PNNL - Private Controlled Venue, 2022.

[W4] A. Ayala, C. Drazic, S. Bassetti, **E. Slyman**, B. Nieva, P. Wolters, K. Bittner, C. Tebaldi, B. Kravitz, and B. Hutchinson. *"Conditional Emulation of Global Precipitation With Generative Adversarial Networks,"* ICLR workshop on AI for Earth and Space Science (AI4ESS), 2022. [ai4earthscience.github.io]

[W5] **E. Slyman**, C. Daw, M. Skrabut, A. Usenko, and B. Hutchinson. *"Fine-Grained Classroom Activity Detection from Audio with Neural Networks,"* AAAI Workshop on Artificial Intelligence for Education (AI4ED), 2022. [arxiv.org/abs/2107.14369]

[W6] A. Ayala, C. Drazic, **E. Slyman**, P. Wolters, B. Nieva, B. Hutchinson, C. Tebaldi, and B. Kravitz. *"Conditioned Emulation of Global Climate Models With Generative Adversarial Networks,"* NOAA Workshop on Leveraging AI in Environmental Sciences, 2021. Extended Abstract.

[P1] **E. Slyman**, A. Tandon, A. Khanna, H. Ravi, S. Garg, and S. Iyer. *"Integrating Continuous Modalitiies Into Pretrained MLLMs Without Forgetting,"* U.S. Patent Application (unpublished), filed October 2025 (Adobe Inc.).

[P2] **E. Slyman**, G. Park, K. Kafle, and Xiaoyang (Rebecca) Li. *"Calibrating MLLM As A Judge,"* U.S. Patent Application (unpublished), filed May 2025 (Adobe Inc.).

[P3] **E. Slyman**, S. Cohen, and K. Kafle. *"Generating And Modifying Digital Image Databases Through Fairness Deduplication,"* U.S. Patent Application (unpublished), filed April 2024 (Adobe Inc.).

[A1] D. Claborne, **E. Slyman**, and K. Pazdernik. *"On the Behavior of Audio-Visual Fusion Architectures in Identity Verification Tasks,"* arXiv preprint, 2023. [arxiv.org/abs/2311.05071]

HONORS

ICCV	Oustanding Reviewer (Top 3%)	2025
oSTEM	Award for hosting a highly attended conference session	2024
Google/OSU	Google PhD Fellowship Finalist: One of two students nominated university-wide	2024
OSU	Invited Poster, AI Week Global Futures Forum Reception [web]	2024
OSU	Best Poster, EECS Department AI Meetup for Industry and Alumni [web]	2024
CvF/IEEE	DEI Grant, Computer Vision & Pattern Recognition (CVPR)	2024
OSU	Selected for Featured Program in *State of Diversity* at Oregon State [video]	2024
CvF/IEEE	DEI Grant, International Conference on Computer Vision (ICCV)	2023
Adobe	Category Winner and 2nd Best Overall, Intern Code Quality Jam	2022
OSU	Edith McDougall Scholarship	2022
OSU	Norman & Evelyn Wildish Distinguished Graduate Fellowship	2021
WWU	Academic Excellence in Computer Science Award	2019, 2021
ACM	Alumni Division Winner, WWU Hackathon	2021
WWU	Track Global Fellowship in Computer Science	2019, 2020
ACM	Travel Grant, ACM FAT* (Now ACM FAccT)	2020
WWU	Travel Grant, NeurIPS	2019
WWU	Susan Brown Advancing Technology Education Scholarship	2019
ACM	Best Presentation, WWU Hackathon	2018

TALKS

Sony AI Ethics Group	FairDeDup: Align deduplication with human-values for fair fast training		2025
oSTEM Conference Panel	An exploration of navigating academic spaces as nonbinary		2024
Apple Vision Pro R&D	Scaling Human Oversight for Fair Large Vision-Language Models		2024
OSU State of Diversity	Bias and Representation in Multimodal AI	[video]	2024
Google People+AI Research	Auditing Vision-Language Bias With VL*Slice*		2023
OSU Board of Trustees	Social Bias in Artificial Intelligence		2023
OSU Graduate Showcase	Bias Discovery in Vision-and-Language Artificial Intelligence	[video]	2023
PNNL Computing Colloquium	Corruption Tolerant Audiovisual Embeddings for Person Verification		2021
WWU/PNNL W2D2S2	Fine-Grained Classroom Activity Detection		2021
PNNL Computing Colloquium	Few-Shot Image Segmentation Through Object Recognition		2019
WWU Distinguished Lecture	Machine Learning for Classroom Analysis		2019

MEDIA

Orange Hello Future	FairDeDup limits social biases in AI models	[article]		2024
OSU Daily Barometer	OSU researcher seeks to lessen AI biases	[article]		2024
OPB Think Out Loud	Oregon and Washington graduate students tackle problem of bias in AI	[radio]		2024
JPR Jeffe. Exchange	OSU researcher works to screen the bias out of AI	[radio]		2024
WWW Tech Times	Adobe Researchers Develop [...] to Make AI Less Socially Biased	[article]		2024
KLCC Science & Tech.	OSU student heads research in developing anti-bias practices for AI	[radio]		2024
OSU Newsroom	Researchers [...] aim to make AI systems less socially biased	[article]		2024
OSU Inst. Diversity	Eric Slyman works to address fairness and representation in AI	[article]	[interview]	2024
OSU Taking Action	Addressing Bias in AI: Eric Slyman builds tools to where [...]	[article]		2024

SERVICE

Reviewing

- IEEE/CvF Computer Vision and Pattern Recognition (CVPR) 2024-2026
- IEEE/CvF International Conference on Computer Vision (ICCV) 2025
- IEEE/CvF Winter Conference on Applications of Computer Vision (WACV) 2025
- Conference on Neural Information Processing Systems (NeurIPS) 2023-2025
- Transactions on Machine Learning Research (TMLR) 2023-2025
- What is Next in Multimodal Foundation Models Workshop (MMFM @ CVPR) 2024
- IEEE Visualization Conference (VIS) 2024
- ACM Conference on Human Factors in Computing Systems (CHI) 2022
- AAAI Conference on Artificial Intelligence (AAAI) 2022

Outreach

- Co-organizer & panelist - "An exploration of navigating academic spaces as nonbinary," oSTEM 2024
- Founded mentoring program for underserved students applying to OSU AI [aigsa.club/aiasp] 2022
- PNNL STEM Ambassador - Speaking in 6-12th grade classrooms on STEM pathways [pnnl.gov/stem-outreach] 2021

Co-President July 2021 - June. 2025
Supervisor: Stefan Lee *OSU AI Graduate Student Association*

- Elected leadership position in club of 250+ graduate EECS students [aigsa.club]
- Lead organizer on 10+ major events/year, weekly reading groups, and outreach programs
- Organized lightning talks and poster session for AI Week [dri.oregonstate.edu/ai-week]

Graduate Ambassador Sep. 2023 - Sep. 2024
Supervisor: Glencora Borradaile *OSU College of Engineering*

- Supporting recruitment and retention with emphasis on supporting underserved students
- Providing feedback to the Associate Dean for Graduate Programs on graduate-student related initiatives

Early-Career Professional Mentor Sep. 2020 - Sep. 2022
Supervisor: Perry Fizzano *WWU CS/M Scholars*

- Invited mentor for a NSF funded program supporting women, underrepresented minorities, and first generation students in pursuit of degrees in computer science and math