

Adam Casson

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EXPERIENCE	Senior Research Engineer 2019 - Present <ul style="list-style-type: none">Working on self-supervised learning and distillation for pretraining of vision transformers on gigapixel histopathology imagery.Training, evaluating, and optimizing multimodal language models with long-context image inputs.Designing real and synthetic multimodal data pipelines with a focus on enabling clinically relevant capabilities in vision-language models.Directly collaborating with Microsoft Research for large-scale vision transformer training.Co-author of papers that appeared in Nature Medicine, Cancer Research, The Journal of Pathology, MIDL, as well as multiple tech reports.Core contributor to the research and development of the first FDA approved AI in pathology.Building high-performance training infrastructure to enable rapid experimentation and development.One of the first AI employees at the company and have helped build out the team to 30+ people.	Paige.AI New York, NY
	Machine Learning Engineer 2017 - 2019 <ul style="list-style-type: none">Researched temporal word embeddings for understanding semantic drift.Worked on facial recognition, object detection, and scene detection for videos.Organized and taught a weekly machine learning course for coworkers.	Comcast-NBCUniversal New York, NY
	Research Assistant 2016 - 2017 <ul style="list-style-type: none">Researched mulitmodal vision-language models for video question answering.Developed a synthetic data pipeline to generate question-answer pairs from video captions usinig neural dependency parsing.Trained a multimodal architecture to jointly reason over videos and text to answer questions.	Rochester Institute of Technology Rochester, NY
EDUCATION	Rochester Institute of Technology , Rochester, NY <i>Bachelor of Science</i> , Imaging Science	2013 - 2017
TECHNICAL SKILLS	Languages: Python Libraries: PyTorch, Triton, Numpy, Pandas, Sklearn, CUDA Tooling: Docker, Git, Slurm Distributed computing: Multi-node distributed training and inference	
SELECTED PUBLICATIONS	Zimmermann, E., Vorontsov, E., Viret, J., Casson, A. , Zelechowski, M., Shaikovski, G., Tenenholtz, N., Hall, J., Fuchs, T., Fusi, N., Liu, S., Severson, K. (2024) Virchow2: Scaling Self-Supervised Mixed Magnification Models in Pathology. <i>arXiv preprint</i> .	

Vorontsov, E.*, Bozkurt, A.*, **Casson, A.***, Shaikovski, G.*, Zelechowski, M.*, Severson, K.*, Zimmermann, E., Hall, J., Tenenholtz, N., Fusi, N., Yang, E., Mathieu,

P., van Eck, A., Lee, D., Viret, J., Robert, E., Wang, Y.K., Kunz, J.D., Lee, M.C.H., Bernhard, J.H., Godrich, R.A., Oakley, G., Millar, E., Hanna, M., Wen, H., Retamero, J.A., Moye, W.A., Yousfi, R., Kanan, C., Klimstra, D.S., Rothrock, B., Liu, S., Fuchs, T.J. (2024) **A foundation model for clinical-grade computational pathology and rare cancers detection.** *Nature Medicine*. doi: 10.1038/s41591-024-03141-0 [*Equal contribution]

Shaikovski, G.*, **Casson, A.***, Severson, K., Zimmermann, E., Wang, Y., Kunz, J.D., Retamero, J.A., Oakley, G., Klimstra, D., Kanan, C., Hanna, M., Zelechowski, M., Viret, J., Tenenholtz, N., Hall, J., Fusi, N., Yousfi, R., Hamilton, P., Moye, W.A., Voronstov, E., Liu, S., Fuchs, T.J. (2024) **PRISM: A Multi-Modal Generative Foundation Model for Slide-level Histopathology.** *arXiv preprint*. [*Equal contribution]

Zimmermann, E., Tenenholtz, N., Hall, J.B., Shaikovski, G., Zelechowski, M., **Casson, A.**, Milletari, F., Viret, J., Voronstov, E., Liu, S., Severson, K.A. (2024) **Adapting Self-Supervised Learning for Computational Pathology.** *CVPR Workshop on Data Curation and Augmentation in Medical Imaging (DCAMI)*.

Casson, A.*, Liu, S.*, Godrich, R., Aghdam, H., Lee, D., Malfroid, K., Rothrock, B., Kanan, C., Retamero, J., Hanna, M., Millar, E., Klimstra, D., Fuchs, T. (2023) **Joint Breast Neoplasm Detection and Subtyping using Multi-Resolution Network Trained on Large-Scale H&E Whole Slide Images with Weak Labels.** *Medical Imaging with Deep Learning (MIDL)*. [Oral][MedIA Special Issue selectee][*Equal contribution]