

# Adam Casson

*Location:* New York, NY  
*Email:* [cassonadam@icloud.com](mailto:cassonadam@icloud.com)

*Site:* [adamcasson.com](http://adamcasson.com)  
*Github:* [github.com/adamcasson](https://github.com/adamcasson)

---

- INTERESTS**      Deep learning, foundation models, joint vision-language modeling
- EDUCATION**      **Rochester Institute of Technology**, Rochester, NY  
*Bachelor of Science*, Imaging Science      2013 - 2017
- EXPERIENCE**      **Senior Research Engineer**      **Paige.AI**  
2019 - Present      New York, NY
- Working on weakly supervised and self supervised neural networks applied to gigapixel histopathology imagery.
  - Optimizing 500M+ parameter vision transformer training and inference on multiple generations of hardware.
  - Developed and implemented model architecture improvements for the detection and localization of cancer.
  - Collaborating with research, product, and medical teams to deliver models with high clinical utility.
  - Core contributor to the research and development of first ever FDA approved AI system in pathology.
  - Worked on developing ML training framework to increase reproducibility, experiment tracking, code modularity, and lowering the barrier of entry to running experiments.
  - Involved in hiring most of the AI team by helping shape the interview process and doing 100+ technical interviews.
  - Co-authored research on novel weakly supervised methods for breast cancer detection and segmentation.
- Machine Learning Engineer**      **Comcast-NBCUniversal**  
2017 - 2019      New York, NY
- Lead research of temporal language modeling for understanding semantic drift.
  - Worked on facial recognition, object detection, and scene detection for long-form videos.
  - Organized and taught a weekly machine learning course for coworkers.
- Research Assistant**      **Rochester Institute of Technology**  
2016 - 2017      Rochester, NY
- Researched mulitmodal vision-language models for video question answering.
  - Developed a system using dependency parsing to automatically generate diverse sets of question-answer pairs from natural language video descriptions.
  - Developed a multimodal network to jointly reason over videos and natural language to answer questions about a given video.
- TECHNICAL SKILLS**      **Languages:** Python  
**Libraries:** PyTorch, Python scientific computing stack, HuggingFace, W&B, Gradio  
**Tools:** Jupyter/Colab, Docker, Git, Slurm  
**Misc:** Large-scale multi-node training on HPC

**REFEREED  
PUBLICATIONS**

**Casson, A.\***, Liu, S.\*, Godrich, R., Aghdam, H., Rothrock, B., Malfroid, K., Kanan, C., 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] [Accepted, to be published]

Raciti, P., Sue, J., Retamero, J.A., Ceballos, R., Godrich, R., Kunz, J.D., **Casson, A.**, Thiagarajan, D., Ebrahimzadeh, Z., Viret, J., Lee, D., Schüffler, P.J., DeMuth, G., Gulturk, E., Kanan, C., Rothrock, B., Reis-Filho, J., Klimstra, D.S., Reuter, V., Fuchs, T.J. (2022) Clinical validation of artificial intelligence-augmented pathology diagnosis demonstrates significant gains in diagnostic accuracy in prostate cancer detection. *Archives of Pathology and Laboratory Medicine*. doi: 10.5858/arpa.2022-0066-OA

Silva, L., Pereira, E., Salles, P., Godrich, R., Ceballos, R., Kunz, J., **Casson, A.**, Viret, J., Chandarlapaty, S., Ferreira, C., Ferrari, B., Rothrock, B., Raciti, P., Reuter, V., Dogdas, B., DeMuth, G., Sue, J., Kanan, C., Grady, L., Fuchs, T., Reis-Filho, J. (2021). Independent real-world application of a clinical-grade automated prostate cancer detection system. *The Journal of Pathology*. doi: 10.1002/path.5662

**PEER-  
REVIEWED  
ABSTRACTS**

Fresia, P., Dopeso, H., Wang, Y., Goldfinger, M., Gazzo, A., Derakhshan, F., da Silva, E.M., Selenica, P., Basili, T., Danielle, S., Brown, D., Sue, J., Qiqi, Y., Da Cruz Paula, A., Monami, B., Lee, M., Godrich, R., **Casson, A.**, Weigelt, B., Wen, H., Brogi, E., Hanna, M., Kunz, J., Kanan, C., Klimstra, D., Fuchs, T., Reis-Filho, J. (2023). Detection of invasive lobular carcinoma using an artificial intelligence algorithm based on genetic ground truth. *United States & Canadian Academy of Pathology Annual Meeting (USCAP)*.

Reis-Filho, J.S., Pareja, F., Derakhshan, F., Brown, D.N., Sue, J., Selenica, P., Wang, Y.K., Da Cruz Paula, A., Banerjee, M., Ebrahimzadeh, Z., Isava, M., Lee, M., Godrich, R., **Casson, A.**, Padron, R., van Eck, A., Marra, A., Dopeso, H., Wen, H.Y., Brogi, E., Hanna, M.G., Kanan, C., Kunz, J.D., Geyer, F.C., Leibowitz, C., Klimstra, D., Grady, L., Fuchs, T.J. (2021). An artificial intelligence-based predictor of CDH1 biallelic mutations and lobular carcinoma. *San Antonio Breast Cancer Symposium (SABCS)*.

Hanna, M., Lee, M., Bozkurt, A., Godrich, R., **Casson, A.**, Raciti, P., Sue, J., Viret, J., Lee, D., Grady, L., Rothrock, B., Dogdas, B., Fuchs, T., Reis-Filho, J., Kanan, C. (2021). Morphological Breast Cancer Subtyping by Weakly Supervised Neural Networks. *United States & Canadian Academy of Pathology Annual Meeting (USCAP)*.

Hanna, M., Raciti, P., Godrich, R., **Casson, A.**, Viret, J., Lee, D., Lee, M., Bozkurt, A., Sue, J., Dogdas, B., Rothrock, B., Grady, L., Kanan, C., Fuchs, T. (2020). Clinical-grade detection of breast cancer in biopsies and excisions using machine learning. *San Antonio Breast Cancer Symposium (SABCS)*.

Glas, A., Reis-Filho, J., Wehkamp, D., Dogdas, B., Delahaye, L., Godrich, R., Mollink, J., **Casson, A.**, Witteveen, A., Viret, J., Lee, D., Lee, M., Horlings, H., Grady, L., Fuchs, T., Audeh, W., Kanan, C., van't Veer, L. (2020). Digital MammaPrint and Blueprint using machine learning and whole slide imaging. *San Antonio Breast Cancer Symposium (SABCS)*.

Dogdas, B., Kanan, C., Raciti, P., Tian, K., Brookman-May, S., Wetherhold, L., Smith, A., Rooney, B., McCarthy, S., Alvarez, J., Lopez-Gitlitz, A., **Casson, A.**, Godrich, R., Kunz, J., Ceballos, R., Leibowitz, C., Grady, L., Fuchs, T. (2020). Computational pathological identification of prostate cancer following neoadjuvant treatment. *American Society of Clinical Oncology Annual Meeting (ASCO)*.